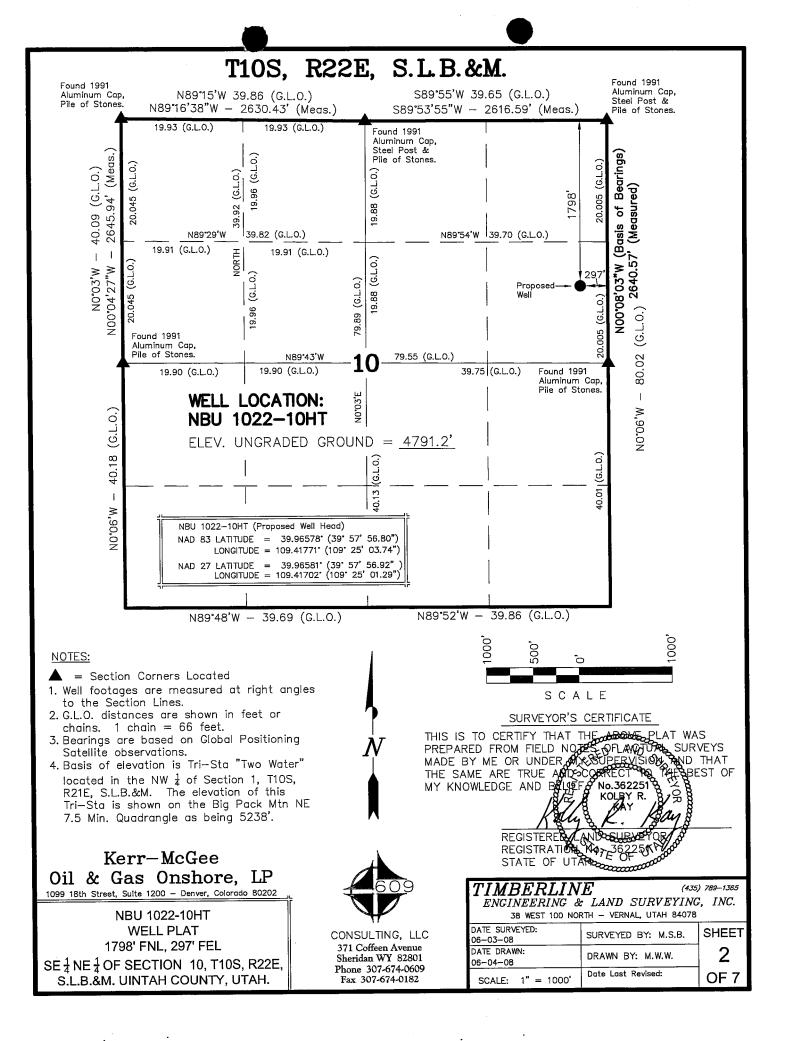
Form 3160-3 (August, 2007)

UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT

FORM APPROVED

OMB NO.	1004-013
Expires: Ju	ily 31, 201

APPLICATION FOR PERMIT TO	DRILL OR REENTER	o. If Indian, Allottee or Tribe Name
1a. Type of Work: X DRILL	REENTER	N/A 7. If Unit or CA Agreement, Name and No. 891008900A
1b. Type of Well: X Gas Well Other	r Single Zone X Multiple Z	8. Lease Name and Well No. NBU 1022-10HT
2. Name of Operator		9. API Well No.
Kerr-McGee Oil & Gas (Onshore, LP	43-047-40195
3a. Address	3b. Phone No. (include area code)	10. Field and Pool, or Exploratory
P.O. Box 173779 Denver, CO 80217-3779	720.929.6226	Natural Buttes Field
4. Location of well (Report location clearly and In account At surface 1798 635 199 X FNL 297 FEL SE NE Lat. At proposed prod. zone N/A	-109, 414, 94, 9 NAD 27	11. Sec.,T.,R.,M.,or Blk.and Survey or Area Sec 10 T 10S R 22E
14. Distance in miles and direction from the nearest town	or post office*	12. Cou State
28.5 miles east of Ouray, Utah		Uintah Utah
15. Distance from proposed*	16. No. of acres in lease 1	7. Spacing Unit dedicated to this well
location to nearest property or lease line, ft. (Also to nearest drlg. unit line, if any)	600	
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft.	8200'	0. BLM/ BIA Bond No. on file RECEIVED VYB000291
21. Elevations (Show whether DF. RT, GR, etc.)	22. Aproximate date work wil	
4,791' GR	Upon Approval	10 days Div. OF Oil, GAS & MINING
TL CII	24. Attachments	
 Well plat certified by a registered surveyor. A Drilling Plan. A Surface Use Plan (if the location is on National Fore SUPO shall be filed with the appropriate Forest Service) 	4. Bond to cover the citem 20 above). sst System Lan 5. Operator certification.	operations unless covered by existing bond on file(see
25. Signature	Name (Printed/ Typed) Kevin M	CIntyre
Title Regulatory Analyst		
Deadly	Name (Printed/ Typed) BRADLEY G HILL	07-16-08
	Office ENVIRONMENTAL MANAGE	R
Application approval does not warrant or certify that the applicant conduct operations thereon. Conditions of approval, if any, are attached.		
Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, master any false, fictitious or fraudulent statements or representations	ake it a crime for any person knowingly a s as to any matter within its jurisdiction.	and willfully to make to any department or agency of the



NBU 1022-10HT SENE Sec. 10, T10S,R22E UINTAH COUNTY, UTAH UTU-025187

ONSHORE ORDER NO. 1

DRILLING PROGRAM

1. Estimated Tops of Important Geologic Markers:

<u>Formation</u>	<u>Depth</u>
Uinta	0- Surface
Green River	690'
Bird's Nest	1036'
Mahogany	1520'
Wasatch	3821'
Mesaverde	6102'
MVU2	7113'
MVL1	7675'
TD	8200'

2. <u>Estimated Depths of Anticipated Water, Oil, Gas, or Mineral Formations</u>:

Substance	<u>Formation</u>	<u>Depth</u>
	Green River	690'
	Bird's Nest	1036'
	Mahogany	1520'
Gas	Wasatch	3821'
Gas	Mesaverde	6102'
Gas	MVU2	7113'
Gas	MVL1	7675'
Water	N/A	, 0, 0
Other Minerals	N/A	

3. <u>Pressure Control Equipment</u> (Schematic Attached)

Please see the Natural Buttes Unit Standard Operating Procedure (SOP).

4. <u>Proposed Casing & Cementing Program:</u>

Please see the Natural Buttes Unit SOP.

5. <u>Drilling Fluids Program:</u>

Please see the Natural Buttes Unit SOP.

6. <u>Evaluation Program:</u>

Please see the Natural Buttes Unit SOP.

7. <u>Abnormal Conditions:</u>

Maximum anticipated bottomhole pressure calculated at 8200' TD, approximately equals 5084 psi (calculated at 0.62 psi/foot).

Maximum anticipated surface pressure equals approximately 3280 psi (bottomhole pressure minus the pressure of a partially evacuated hole calculated at 0.22 psi/foot).

8. <u>Anticipated Starting Dates:</u>

Drilling is planned to commence immediately upon approval of this application.

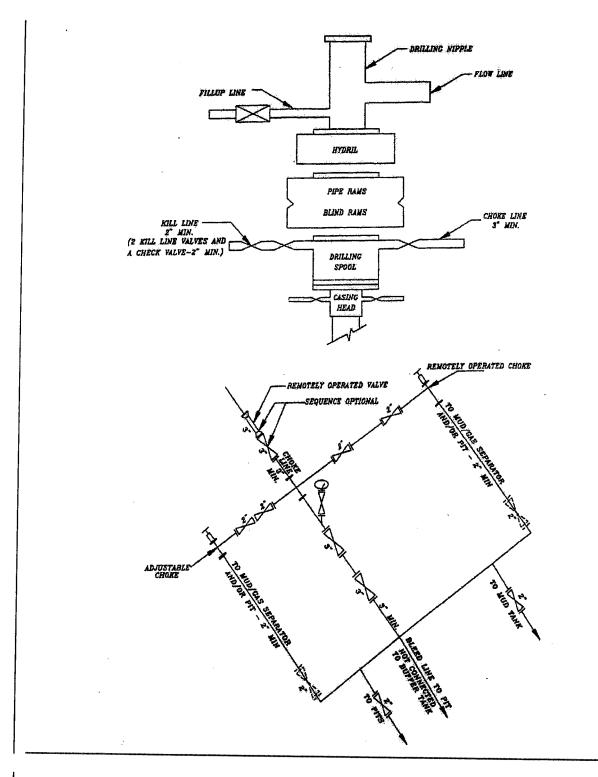
9. <u>Variances:</u>

Please see Natural Buttes Unit SOP. Please see Kerr McGee's sundry regarding variance request to Onshore Order #2 regarding Air drilling for surface casing.

10. Other Information:

Please see Natural Buttes Unit SOP.

EXHIBIT A



SCHEMATIC DIAGRAM OF 5,000 PSI BOP STACK

NBU 1022-10HT SENE Sec. 10 ,T10S,R22E UINTAH COUNTY, UTAH UTU-025187

ONSHORE ORDER NO. 1

MULTI-POINT SURFACE USE & OPERATIONS PLAN

1. Existing Roads:

Refer to the attached location directions.

Refer to Topo Maps A and B for location of access roads within a 2-mile radius.

2. Planned Access Roads:

No new access road is planned, as this is a twin location. Refer to Topo Map B.

Existence of pipelines; maximum grade; turnouts; major cut and fills, culverts, or bridges; gates, cattle guards, fence cuts, or modifications to existing facilities were determined at the on-site.

Please see the Natural Buttes Unit Standard Operating Procedure (SOP).

3. Location of Existing Wells Within a 1-Mile Radius:

Please refer to Topo Map C.

4. Location of Existing & Proposed Facilities:

No new pipeline, as we will be utilizing the existing NBU #293 pipeline. No TOPO D attached.

Please see the Natural Buttes Unit SOP.

Variances to Best Management Practices (BMPs) Requested:

All facilities will be painted within six months of installation. Facilities required to comply with the Occupational Safety and Health Act (OSHA) will be excluded. The requested color is Carlsbad Canyon Brown (2.5Y 6/2), a non-reflective earthtone.

Interim Surface Reclamation Plan:

This exception is requested due to the current twin and multi-well program. If determined that this well will not be a candidate for either twinning &/or multi-well the operator shall spread the topsoil pile on the location up to the rig anchor points. The location will be reshaped to the

original contour to the extent possible. The operator will reseed the area using the BLM recommended seed mixture and reclamation methods.

5. <u>Location and Type of Water Supply:</u>

Please see the Natural Buttes SOP.

6. Source of Construction Materials:

Please see the Natural Buttes SOP.

7. <u>Methods of Handling Waste Materials:</u>

Please see the Natural Buttes SOP.

A plastic reinforced liner is to be used as discussed during on-site inspection. It will be a minimum of 20 mil thick and felt, with sufficient bedding used to cover any rocks. The liner will overlap the pit walls and be covered with dirt and/or rocks to hold it in place. No trash or scrap that could puncture the liner will be disposed of in the pit.

Any produced water from the proposed well will be contained in a water tank and will then be hauled by truck to one of the pre-approved disposal sites: RNI, Sec. 5, T9S, R22E, NBU #159, Sec. 35, T9S R21E, Ace Oilfield, Sec. 2, T6S, R20E, MC&MC, Sec. 12, T6S, R19E, Pipeline Facility Sec. 36, T9S, R20E, Goat Pasture Evaporation Pond SW/4 Sec. 16, T10S, R22E, Bonanza Evaporation Pond Sec. 2, T10S, R23E (Request is in lieu of filing Form 3160-5, after initial production).

8. Ancillary Facilities:

Please see the Natural Buttes SOP.

9. Well Site Layout: (See Location Layout Diagram)

The attached Location Layout Diagram describes drill pad cross-sections, cuts and fills, and locations of the mud tanks, reserve pit, flare pit, pipe racks, trailer parking, spoil dirt stockpile(s), and surface material stockpile(s).

Please see the attached diagram to describe rig orientation, parking areas, and access roads.

Location size may change prior to the drilling of the well due to the current rig availability. If the proposed location is not large enough to accommodate the drilling rig. The location will be resurveyed and a form 3160-5 will be submitted.

10. Plans for Reclamation of the Surface:

Please see the Natural Buttes SOP.

upon reclamation of the pit the following seed mixture will be used. A total of 12 lbs/acre will be used if the seeds are drilled (24 lbs/acre if the seeds are broadcast). The per acre requirements for *drilled* seed are:

Crested Wheatgrass 12 lbs.

Operator shall call the BLM for the seed mixture when final reclamation occurs.

11. Surface/Mineral Ownership:

The well pad, access road, pipeline and mineral ownership are listed below:

United States of America Bureau of Land Management 170 South 500 East Vernal, UT 84078 (435)781-4400

12. Stipulations

Wildlife Stipulations:

Antelope Stipulations:
 No construction from May 15 through June 20.

Critical Soils Stipulations:

No construction when wet.

13. Other Information:

A Class III archaeological survey and a paleontological survey have been performed and will be submitted.

This location is not within 460' from the boundary of the Natural Buttes Unit, nor is it within 460' of any non-committed tract lying within the boundaries of the Unit.

14. <u>Lessee's or Operator's Representative & Certification:</u>

Kevin McIntyre Regulatory Analyst Kerr-McGee Oil & Gas Onshore LP P.O. Box 173779 Denver, CO 80217-3779 (720) 929-6226

Randy Bayne
Drilling Manager
Kerr-McGee Oil & Gas Onshore LP
1368 South 1200 East
Vernal, UT 84078
(435) 781-7018

Certification: All lease and/or unit operations will be conducted in such a manner that full compliance is made with all applicable laws, regulations, Onshore Oil and Gas Orders, the approved Plan of Operations, and any applicable Notice to Lessees.

Kerr-McGee Oil & Gas Onshore LP is considered to be the operator of the subject well. Kerr-McGee Oil & Gas Onshore LP agrees to be responsible under the terms and conditions of the lease for the operations conducted upon leased lands.

The Operator will be fully responsible for the actions of its subcontractors. A complete copy of the approved "Application for Permit to Drill" will be furnished to the field representative(s) to ensure compliance and shall be on location during all construction and drilling operations.

Bond coverage pursuant to 43 CFR 3104 for lease activities is being provided by BLM Nationwide Bond #WYB000291.

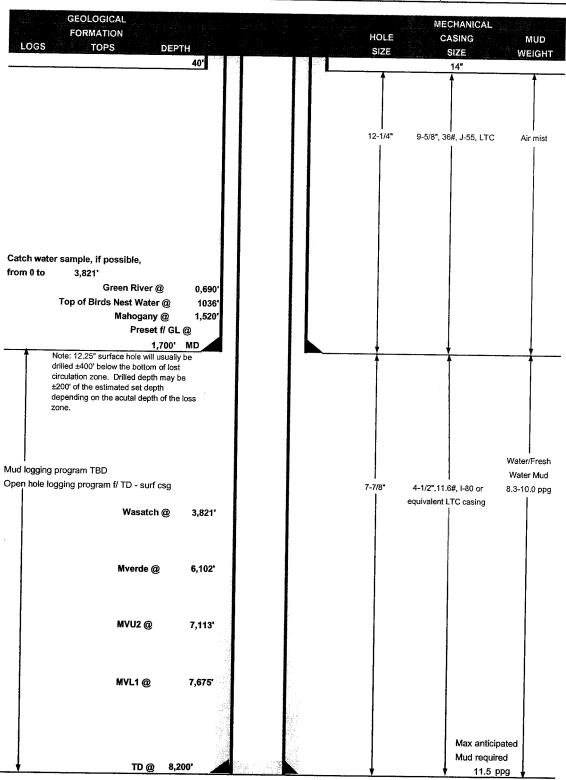
I hereby certify that I, or persons under my supervision, have inspected the proposed drill site and access route, that I am familiar with the conditions that currently exist; that the statements made in this plan are, to the best of my knowledge, true and correct; and the work associated with the operations proposed herein will be performed by the Operator, its contractors, and subcontractors in conformity with this plan and the terms and conditions under which it is approved.

King made	6/24/2008
Kevin McIntyre	Date



KERR-McGEE OIL & GAS ONSHORE LP DRILLING PROGRAM

COMPANY NAME	KERR-McGEE OIL & GAS ONSHORE LP	DATE	June 24, 2008	
WELL NAME	NBU 1022-10HT	TD	8,200' MD/TVD	
FIELD Natural Butte	SIAIE		ELEVATION 4,791'	GL KB 4,806'
SURFACE LOCATION	SENE 1798' FNL & 297' FEL, SEC. 10, T10S,	, R22E		BHL Straight Hole
	Latitude: 39.965810 Longitude: -109	.417020	NAD 27	
OBJECTIVE ZONE(S)	Wasatch/Mesaverde			
ADDITIONAL INFO	Regulatory Agencies: BLM (SURF & MINERA	LS), UDOG	GM, Tri-County Health Dept.	



CASING PROGRAM

		: XX-0, XX-0					DESIGN FACT	TORS
CONDUCTOR	SIZE	INTERVAL	WT.	GR.	CPLG.	BURST	COLLAPSE	TENSION
CONDUCTOR	14"	0-40'						S 2000 00 00 00 00 00 00 00 00 00 00 00 0
SURFACE	9-5/8"	0 to 1700	36.00	J-55	1.70	3520	2020	453000
			30.00	J-55	LTC	1.14 7780	2.54 6350	9.42
PRODUCTION	4-1/2"	0 to 8200	11.60	1-80	LTC	2.51	1.29	201000 2.42
							7120	2.72
4)	L	· · · · · · · · · · · · · · · · · · ·						

¹⁾ Max Anticipated Surf. Press.(MASP) (Surface Casing) = (Pore Pressure at next csg point-(0.22 psi/ft-partial evac gradient x TVD of next csg point)

2) MASP (Prod Casing) = Pore Pressure at TD - (.22 psi/ft-partial evac gradient x TD)

(Burst Assumptions: TD =

11.5 ppg)

.22 psi/ft = gradient for partially evac wellbore

(Collapse Assumption: Fully Evacuated Casing, Max MW) MASP 3280 psi

(Tension Assumptions: Air Weight of Casing*Buoy.Fact. of water)

CEMENT PROGRAM

		FT. OF FILL	DESCRIPTION	SACKS	EXCESS	WEIGHT	YIELD
SURFACE	LEAD	500	Premium cmt + 2% CaCl	215	60%	15,60	1.18
Option 1			+ .25 pps flocele		50.00		West Common A
	TOP OUT CMT (1	200	20 gals sodium silicate + Premium cmt	50		15.60	1.18
			+ 2% CaCl + .25 pps flocele			10.00	1.10
	TOP OUT CMT (2	as required	Premium cmt + 2% CaCl	as req.		15.60	1.18
SURFACE			NOTE: If well will circulate water to s		ion 2 will b		1.10
Option 2	LEAD	1500	Prem cmt + 16% Gel + 10 pps gilsonite	170	35%	11.00	1 200
			+.25 pps Flocele + 3% salt BWOC	1	3378	17.00	3.82
	TAIL	500	Premium cmt + 2% CaCl	180	35%	15.60	4.40
			+ .25 pps flocele	100	3376	13.00	1.18
	TOP OUT CMT	as required	Premium cmt + 2% CaCl	as req.		15.60	4.0
				as req.		10.00	1.18
PRODUCTION	1 LEAD	3,320'	Premium Lite II + 3% KCI + 0.25 pps	360	6007	44.00	
			celloflake + 5 pps gilsonite + 10% gel	300	60%	11.00	3.38
			+ 0.5% extender				
			· 0.0 /u eyfeildel		72,700 Y.X.		8822233555555555555555555
	TAIL	4.880'	50/50 Poz/C + 109/ co# / 29/!				
	IAIL	7,000	50/50 Poz/G + 10% salt + 2% gel	1370	60%	14.30	1.31
	Į.		+:1% R-3				

^{*}Substitute caliper hole volume plus 0% excess for LEAD if accurate caliper is obtained

FLOAT EQUIPMENT & CENTRALIZERS

SURFACE	Guide shoe, 1 jt, insert float. Centralize first 3 joints with bow spring centralizers. Thread lock guide shoe.
PRODUCTION	Float shoe, 1 jt, float collar. Centralize first 3 joints & every third joint to top of tail cement with bow spring centralizers.

ADDITIONAL INFORMATION

Test casing head to 750 psi after installing.	Test surface casing to 1,500 psi prior to drilling out

BOPE: 11" 5M with one annular and 2 rams. Test to 5,000 psi (annular to 2,500 psi) prior to drilling out. Record on chart recorder & tour sheet. Function test rams on each trip. Maintain safety valve & inside BOP on rig floor at all times. Kelly to be equipped with upper & lower kelly valves.

Drop Totco surveys every 2000'. Maximum allowable hole angle is 5 degrees.

Most rigs have PVT Systems for mud monitoring. If no PVT is available, visual monitoring will be utilized.

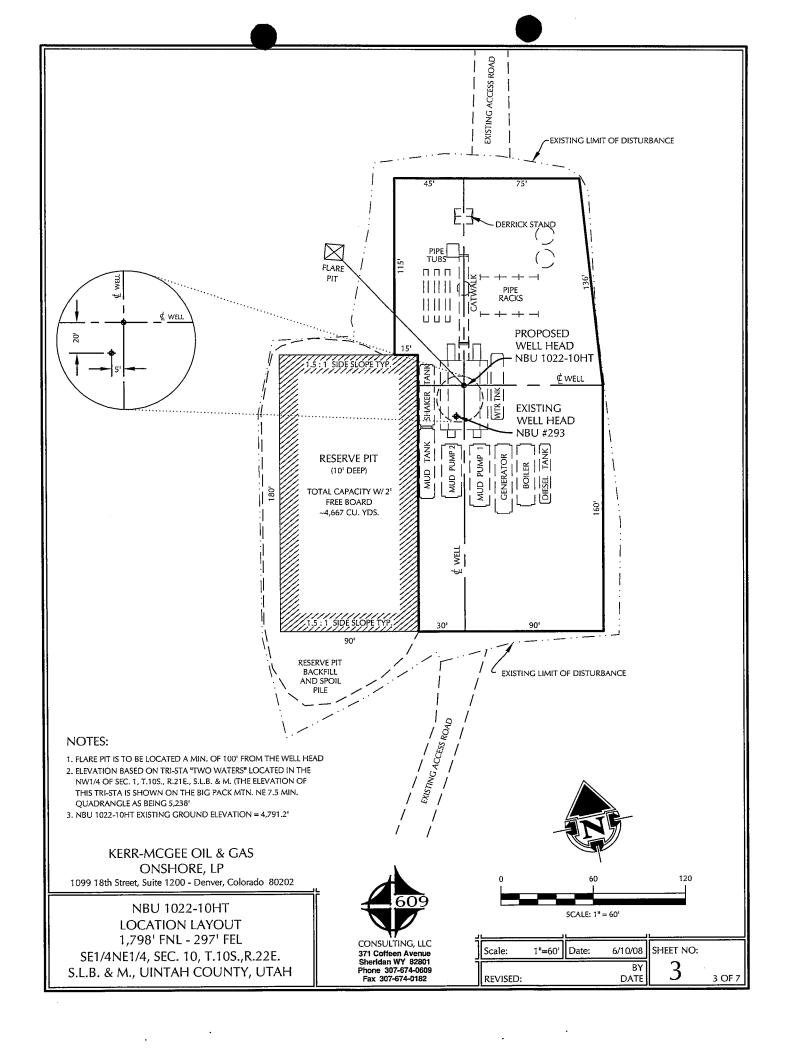
DRILLING ENGINEER:			DATE:	
DRILLING SUPERINTENDENT:	Brad Laney		DATE:	
	Randy Bayne	NBU 1022-10HT.xis	DATE:	

^{*}Substitute caliper hole volume plus 10% excess for TAIL if accurate caliper is obtained

Kerr-McGee Oil & Gas Onshore, LP NBU #1022-10HT SECTION 10, T10S, R22E, S.L.B.&M.

PROCEED IN A WESTERLY DIRECTION FROM VERNAL, UTAH, ALONG U.S. HIGHWAY 40 APPROXIMATELY 13.2 MILES TO THE JUNCTION OF STATE HIGHWAY 88; EXIT LEFT AND PROCEED IN A SOUTHERLY DIRECTION APPROXIMATELY 16.5 MILES TO OURAY, UTAH; PROCEED FROM OURAY, UTAH, IN A SOUTHERLY DIRECTION ON STATE HIGHWAY 88 APPROXIMATELY 9.4 MILES TO THE JUNCTION OF STATE HIGHWAY 88 AND SEEP RIDGE ROAD; EXIT LEFT AND PROCEED IN A SOUTHEASTERLY DIRECTION APPROXIMATELY 1.7 MILES TO THE JUNCTION OF THIS ROAD AND GLEN BENCH ROAD; EXIT LEFT AND PROCEED IN AN EASTERLY DIRECTION FOR APPROXIMATELY 5.1 MILES TO THE JUNCTION OF THIS ROAD, TURN RIGHT AND PROCEED IN A SOUTHERLY DIRECTION, GRADUALLY CHANGING TO EASTERLY FOR APPROXIMATELY 9.4 MILES TO THE JUNCTION OF THIS ROAD AND AN EXISTING ROAD TO THE NORTH; TURN LEFT AND PROCEED IN A NORTHERLY DIRECTION APPROXIMATELY 2.9 MILES TO THE JUNCTION OF THIS ROAD AND THE PROPOSED NBU 1022-10HT WELL LOCATION.

TOTAL DISTANCE FROM VERNAL, UTAH, TO THE PROPOSED NBU 1022-10HT WELL LOCATION IS APPROXIMATELY 58.2 MILES.



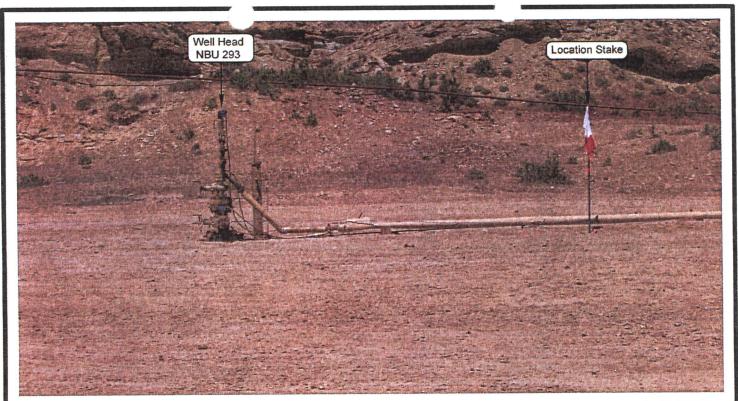


PHOTO VIEW: LOCATION STAKE

CAMERA ANGLE: NORTHWESTERLY

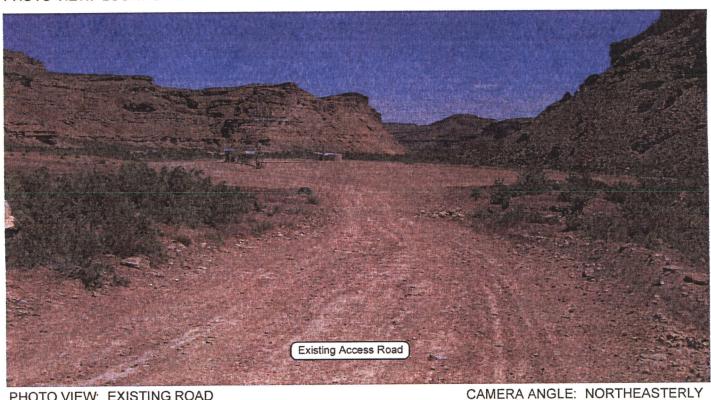


PHOTO VIEW: EXISTING ROAD

Kerr-McGee Oil & Gas Onshore, LP

1099 18th Street, Suite 1200 - Denver, Colorado 80202

NBU 1022-10HT 1798' FNL, 297' FEL SE $\frac{1}{4}$ NE $\frac{1}{4}$ OF SECTION 10, T10S, R22E, S.L.B.&M. UINTAH COUNTY, UTAH.

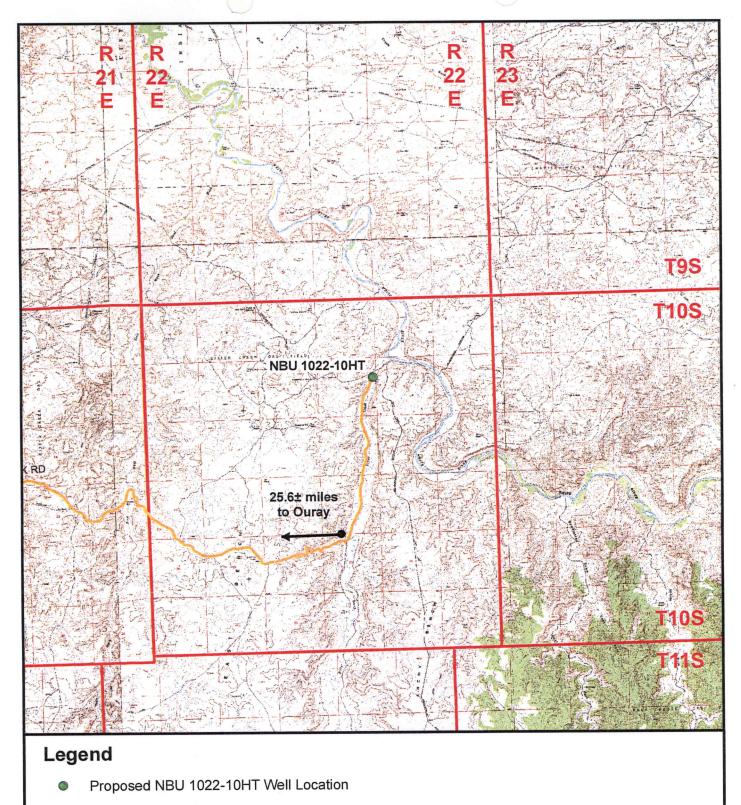


CONSULTING, LLC 371 Coffeen Avenue Sheridan WY 82801 Phone 307-674-0609 Fax 307-674-0182

LOCATION	DHOTOS	DATE TAKEN: 06-03-08		
LOCATION	PHOTOS	DATE DRAWN: 06-04-08		
TAKEN BY: M.S.B.	DRAWN BY: M.W.W.	REVISED:		

Timberline

(435) 789-1365 Engineering & Land Surveying, Inc. 38 WEST 100 NORTH VERNAL, UTAH 84078 SHEET OF 7



Existing Access Roads

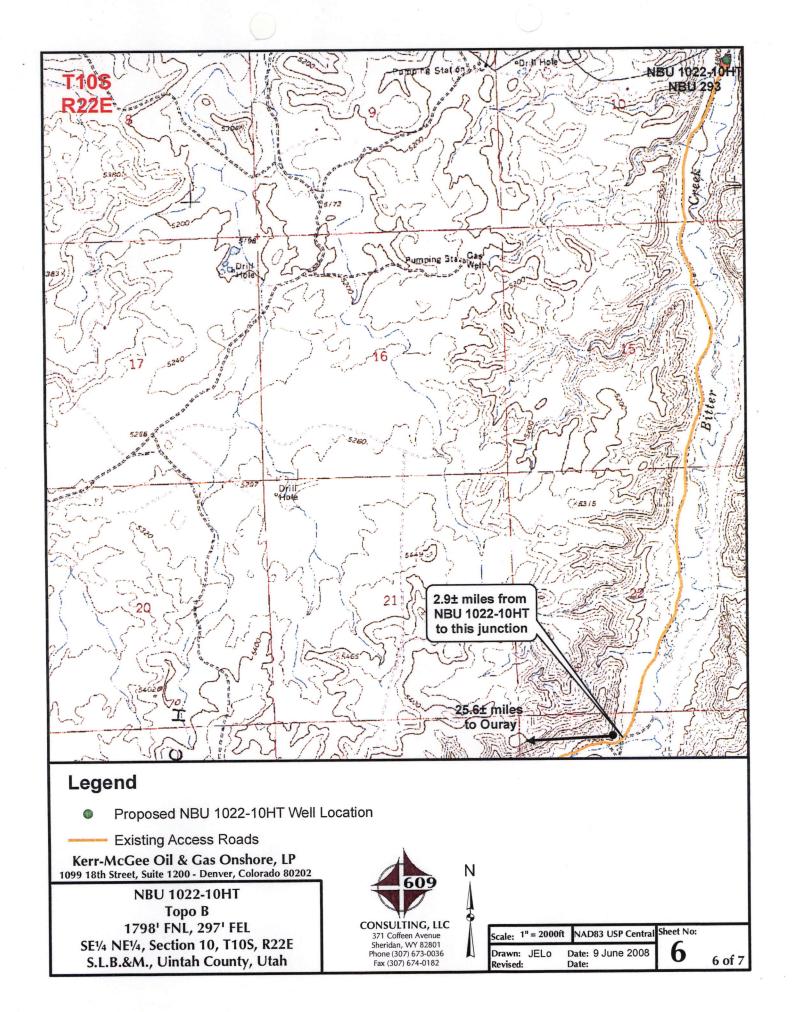
Kerr-McGee Oil & Gas Onshore, LP 1099 18th Street, Suite 1200 - Denver, Colorado 80202

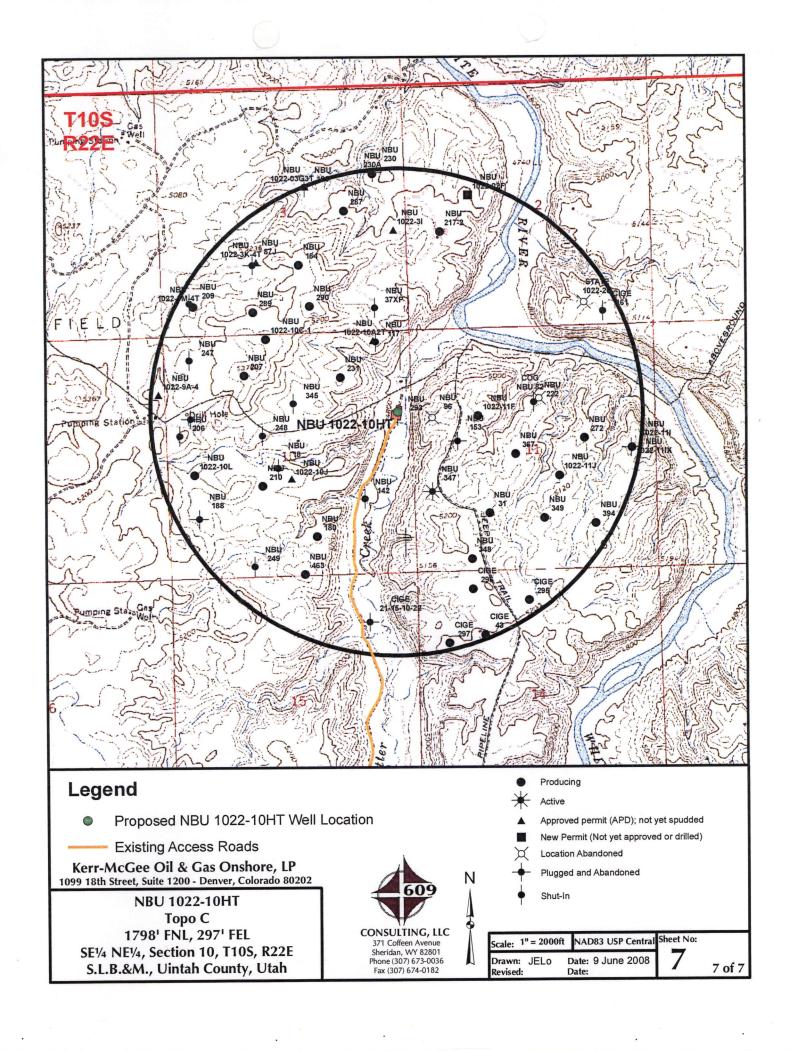
NBU 1022-10HT Topo A 1798' FNL, 297' FEL SE'4 NE'4, Section 10, T10S, R22E S.L.B.&M., Uintah County, Utah



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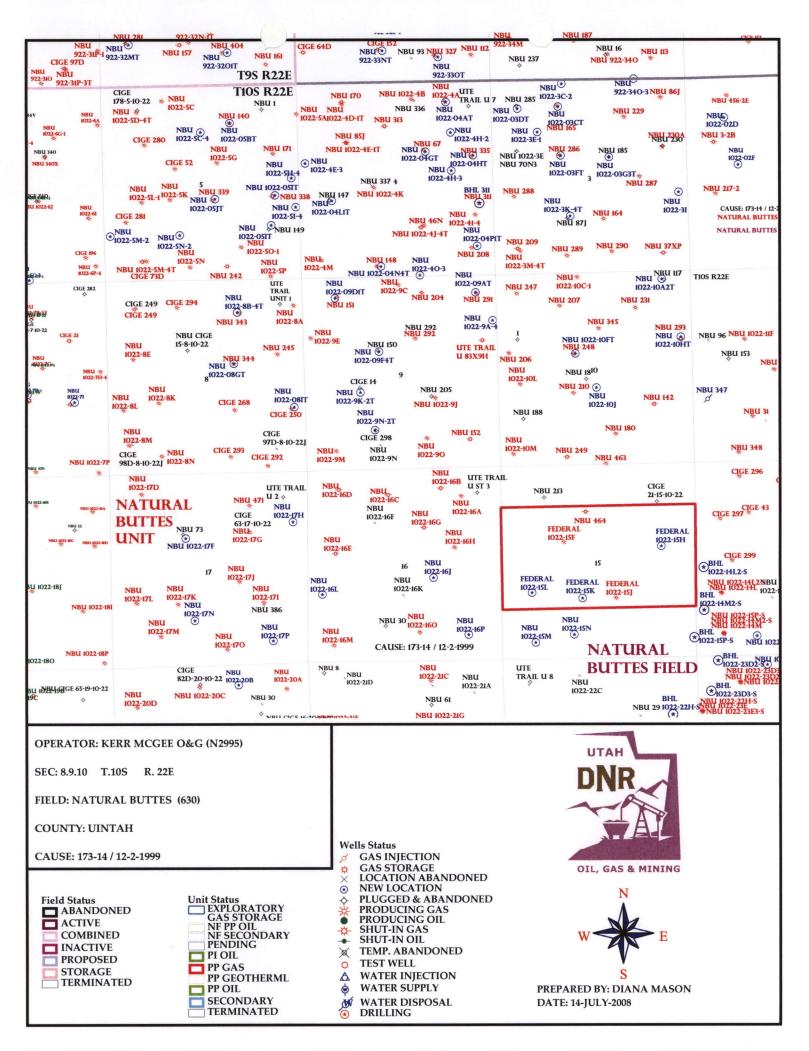
Scale: 1:100,000	NAD83 USP Central	Sheet No:	
Drawn: JELo Revised:	Date: 12 June 2008 Date:	5	5 of 7





APD RECEIVED: 06/27/2008	API NO. ASSIG	GNED: 43-047	-40195		
WELL NAME: NBU 1022-10HT					
OPERATOR: KERR-MCGEE OIL & GAS (N2995)	PHONE NUMBER:	720-929-6226			
CONTACT: KEVIN MCINTYRE					
PROPOSED LOCATION:	INSPECT LOCATN	I BY: /	/		
SENE 10 100S 220E	Tech Review	Initials	Date		
SURFACE: 1798 FNL 0297 FEL BOTTOM: 1798 FNL 0297 FEL	Engineering				
COUNTY: UINTAH	Geology				
LATITUDE: 39.96572 LONGITUDE: -109.4170 UTM SURF EASTINGS: 635199 NORTHINGS: 44249	Surface				
FIELD NAME: NATURAL BUTTES (630)				
LEASE TYPE: 1 - Federal	DDODOGED EODMAI	TION GOME	AD.		
LEASE NUMBER: UTU-025187 SURFACE OWNER: 1 - Federal	PROPOSED FORMA' COALBED METHAN		עי		
SURFACE OWNER: 1 - Federal	COALBED METHAN.	E METT: NO			
RECEIVED AND/OR REVIEWED:	LOCATION AND SITING:				
Plat	R649-2-3.				
Bond: Fed[1] Ind[] Sta[] Fee[]	Unit: NATURAL BUTTES				
(No. WYB000291)	Unit: NATURAL BUILES				
∠ ∠ ∠ ∠ Potash (Y/N)	R649-3-2. Gener				
✓ Oil Shale 190-5 (B) or 190-3 or 190-13	II.				
Water Permit	R649-3-3. Excep	tion			
(No. 43-8496)	Drilling Unit				
<pre>M RDCC Review (Y/N)</pre>	Board Cause No:				
Fee Surf Agreement (Y/N)	Eff Date:	12219	99		
	Siting: 460 fr	ubdrig un	Born. Trac		
MA Intent to Commingle (Y/N)	R649-3-11. Dire	ectional Dril	1		
	I				
COMMENTS:					

STIPULATIONS:	A Company of the Comp				
7- Pi	SIN: E				
2 011	State				



United States Department of the Interior

BUREAU OF LAND MANAGEMENT

Utah State Office P.O. Box 45155 Salt Lake City, Utah 84145-0155

IN REPLY REFER TO: 3160 (UT-922)

July 15, 2008

Memorandum

To: Assistant District Manager Minerals, Vernal District

From: Michael Coulthard, Petroleum Engineer

Subject: 2008 Plan of Development Natural Buttes Unit

Uintah County, Utah.

Pursuant to email between Diana Whitney, Division of Oil, Gas and Mining, and Mickey Coulthard, Utah State Office, Bureau of Land Management, the following wells are planned for calendar year 2008 within the Natural Buttes Unit, Uintah County, Utah.

API # WELL NAME LOCATION

(Proposed PZ Wasatch/MesaVerde)

43-047-40184	NBU	921-30FT	Sec	30	T09S	R21E	1585	FNL	2614	FWL
43-047-40185	NBU	921-31BT	Sec	31	T09S	R21E	0670	FNL	2008	FEL
43-047-40170	NBU	921-27KT	Sec	27	T09S	R21E	1527	FSL	1821	FWL
43-047-40171	NBU	921-27MT	Sec	27	T09S	R21E	0634	FSL	0931	FWL
43-047-40172	NBU	921-27OT	Sec	27	T09S	R21E	0646	FSL	2211	FEL
43-047-40173	NBU	921-27HT	Sec	27	T09S	R21E	2025	FNL	0623	FEL
43-047-40174	NBU	921-27LT	Sec	27	T09S	R21E	1954	FSL	0641	FWL
43-047-40175	NBU	921-33K	Sec	33	T09S	R21E	2066	FSL	1926	FWL
43-047-40227	NBU	921-27C2D	Sec	27	T09S	R21E	0650	FNL	1730	FWL
43-047-40203	NBU	921-27D2DS	Sec	27	T09S	R21E	0660	FNL	1713	FWL
		BHL	Sec	27	T09S	R21E	0395	FNL	0350	FWL
43-047-40202	NBU	921-27D2AS	Sec	27	T09S	R21E	0640	FNL	1747	FWL
		BHL	Sec	27	T09S	R21E	0050	FNL	0350	FWL
43-047-40201	NBU	921-27C2AS	Sec	27	T09S	R21E	0630	FNL	1765	FWL
		\mathtt{BHL}	Sec	27	T09S	R21E	0300	FNL	1730	FWL
43-047-40169	NBU	921-26IT	Sec	26	T09S	R21E	1964	FSL	0674	FEL
43-047-40176	NBU	922-29NT	Sec	29	T09S	R22E	0845	FSL	1627	FWL
43-047-40177	NBU	922-29KT	Sec	29	T09S	R22E	1795	FSL	1936	FWL
43-047-40178	NBU	922-31BT	Sec	31	T09S	R22E	0888	FNL	2191	FEL

43-047-40179	NBU	922-32ET	Sec	32	T09S	R22E	2477	FNL	0094	FWL
43-047-40186	NBU	922-33OT	Sec	33	T09S	R22E	0692	FSL	1465	FEL
43-047-40187	NBU	922-33NT	Sec	33	T09S	R22E	0890	FSL	2291	FWL
43-047-40188	NBU	922-33IT	Sec	33	T09S	R22E	2115	FSL	0579	FEL
43-047-40191	NBU	1022-04GT	Sec	04	T10S	R22E	1897	FNL	1861	FEL
43-047-40189	NBU	922-35IT	Sec	35	T09S	R22E	2133	FSL	0627	FEL
43-047-40190	NBU	1022-01CT	Sec	01	T10S	R22E	0819	FNL	2106	${\tt FWL}$
43-047-40192	NBU	1022-08IT	Sec	80	T10S	R22E	1757	FSL	0323	FEL
43-047-40193	NBU	1022-08GT	Sec	80	T10S	R22E	2313	FNL	1922	FEL
43-047-40194	NBU	1022-09AT	Sec	09	T10S	R22E	0472	FNL	0582	FEL
43-047-40195	NBU	1022-10HT	Sec	10	T10S	R22E	1798	FNL	0297	FEL
43-047-40196	NBU	1022-10FT	Sec	10	T10S	R22E	2200	FNL	2094	FWL
43-047-40204	NBU	1022-32D1S	Sec	32	T10S	R22E	0205	FNL	2058	FWL
		BHL	Sec	32	T10S	R22E	0270	FNL	1310	FWL
43-047-40205	NBU	1022-32D4AS	Sec	32	T10S	R22E	0198	FNL	2077	${\tt FWL}$
		BHL	Sec	32	T10S	R22E	0760	FNL	1180	FWL
43-047-40206	NBU	1022-32B3S	Sec	32	T10S	R22E	0185	FNL	2114	FWL
		BHL	Sec	32	T10S	R22E	1150	FNL	2130	FEL
43-047-40207	NBU	1022-32D4DS	Sec	32	T10S	R22E	0192	FNL	2096	${\tt FWL}$
		BHL	Sec	32	T10S	R22E	1240	FNL	1050	${\tt FWL}$

This office has no objection to permitting the wells at this time.

/s/ Michael L. Coulthard

bcc: File - Natural Buttes Unit
 Division of Oil Gas and Mining
 Central Files
 Agr. Sec. Chron
 Fluid Chron

MCoulthard:mc:7-15-08





MICHAEL R. STYLER Executive Director

Division of Oil, Gas and Mining

JOHN R. BAZA
Division Director

July 16, 2008

Kerr-McGee Oil & Gas Onshore, LP P O Box 173779 Denver, CO 80217-3779

Re:

NBU 1022-10HT Well, 1798' FNL, 297' FEL, SE NE, Sec. 10, T. 10 South, R. 22 East,

Uintah County, Utah

Gentlemen:

Pursuant to the provisions and requirements of Utah Code Ann.§ 40-6-1 *et seq.*, Utah Administrative Code R649-3-1 *et seq.*, and the attached Conditions of Approval, approval to drill the referenced well is granted.

This approval shall expire one year from the above date unless substantial and continuous operation is underway, or a request for extension is made prior to the expiration date. The API identification number assigned to this well is 43-047-40195.

Sincerely,

Gil Hunt

Associate Director

pab Enclosures

cc:

Uintah County Assessor

Bureau of Land Management, Vernal Office



Operator:	or: Kerr-McGee Oil & Gas Onshore, LP				
Well Name & Number	NBU 1	022-10HT			
API Number:	43-047-40195				
Lease:	UTU-0)25187			
Location: SE NE	Sec. 10	T. 10 South	R. 22 East		

Conditions of Approval

1. General

Compliance with the requirements of Utah Admin. R. 649-1 *et seq.*, the Oil and Gas Conservation General Rules, and the applicable terms and provisions of the approved Application for permit to drill.

2. Notification Requirements

Notify the Division within 24 hours of spudding the well.

• Contact Carol Daniels at (801) 538-5284.

Notify the Division prior to commencing operations to plug and abandon the well.

• Contact Dustin Doucet at (801) 538-5281 office (801) 733-0983 home

3. Reporting Requirements

All required reports, forms and submittals will be promptly filed with the Division, including but not limited to the Entity Action Form (Form 6), Report of Water Encountered During Drilling (Form 7), Weekly Progress Reports for drilling and completion operations, and Sundry Notices and Reports on Wells requesting approval of change of plans or other operational actions.

- 4. State approval of this well does not supersede the required federal approval, which must be obtained prior to drilling.
- 5. In accordance with Order in Cause No. 190-5(b) dated October 28, 1982, the Operator shall comply with requirements of Rules R649-3-31 and R649-3-27 pertaining to Designated Oil Shale Areas. Additionally, the operator shall ensure that the surface and/or production casing is properly cemented over the entire oil shale interval as defined by Rule R649-3-31. The Operator shall report the actual depth the oil shale is encountered to the Division.

ORM APPROVED CEVE

OMB NO. 1004-0137 1 1 5 2008

UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT

5. Lease Serial No.

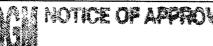
BLM

BUILTIO OF EARIND IV.	IANAUI	ALVITATI LICTIVITÀ	ERNAL FIELD	· · · · · · · · · · · · · · · · · · ·		TU-025187		
APPLICATION FOR PERMIT T	O DRII	LL 👌	REENTER	71 1 6:	⁻ If Indian, Allott	ee or Tribe Name N/A	;	
la. Type of Work: X DRILL	REEN	2008 ITER			. 89	greement, Name 1008900A	and N	O. :
1b. Type of Well: X Gas Well O	ther	Single	EPT OF THE INT	ZóhGw	Lease Name and	d Well No. NBU 1022-10H	Γ	
2. Name of Operator					API Well No.			***************************************
Kerr-McGee Oil & Ga	s Onsho	re, LP) ·		43 N	47 401	95	
3a. Address	3b. Ph	one No	. (include area code)	10.	. Field and Pool,			
P.O. Box 173779 Denver, CO 80217-3779		7	20.929.6226	Nat	tural Buttes Field			
4. Location of well (Report location clearly and In a	ccordance	with an	y State requirements.	.*) 11.	Sec.,T.,R.,M.,or	Blk.and Surve	y or	Area
At surface 1798 297 FEL SE NE I	Lat. 39	.96581	Long109.41	702				
At proposed prod. zone N/A		NAD	27		Sec 10	T 10S R 22E		
14. Distance in miles and direction from the nearest to	wn or post			12.	. Cou State			:
28.5 miles east of Ouray, Utah	•	:		U	intah	Utah		
15. Distance from proposed*		16. No	o. of acres in lease	17. Spa	acing Unit dedicat	ed to this well		
location to nearest property or lease line, ft.	7 ' -	600		10				
(Also to nearest drlg. unit line, if any)		600		40				
18. Distance from proposed location*		19. Pr	oposed Depth	20. BL	M/ BIA Bond No	on file		
to nearest well, drilling, completed, 30 applied for, on this lease, ft.) ¹		8200'	WYB0	00291			
21. Elevations (Show whether DF. RT, GR, etc.)		22. Ap	proximate date work v	will start	Esti *mat			
4,791' GR		Upon 1	Approval		10 days			
		24. Att	achments					
The following, completed in accordance with the requi	rements of	Onshor	e Oil and Gas Order	No. 1 sh	all be attached to	this form:		
Well plat certified by a registered surveyor.			4. Bond to cover th	e operati	ions unless covere	ed by existing bor	nd on f	file(se
2. A Drilling Plan.			item 20 above).			, ,		(
3. A Surface Use Plan (if the location is on National	-		,					
SUPO shall be filed with the appropriate Forest Se	rvice Offic	e).	6. Such other site s authorized office		nformation and/ o	r plans as may be	requir	red by
25. Signature	Name	(Printed	d/ Typed) Kevir	n McInty	re			
Title Regulatory Analyst								
Approved By (Signature)	Name	-	d/Typed)			NOV	19	2008
Title Assistant Field Manager T	Office	VEI)FFIC		* * * * * * * * * * * * * * * * * * *	. 💙	
Application approval does not warrant or certify that the appli	cant holds le	egal or e	quitable title to those ri	ights in th	ne subject lease whi	ch would entitle the	applic	cant to
			OFAP					

(Continued on page 2)

05PF10197

No



Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make the second of the

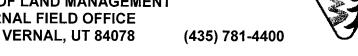
NOV * 2,4,2008 on page 2)



API No:

UNITED STATES DEPARTMENT OF THE INTERIOR **BUREAU OF LAND MANAGEMENT**

VERNAL FIELD OFFICE



CONDITIONS OF APPROVAL FOR APPLICATION FOR PERMIT TO DRILL

Company: Kerr McGee Oil & Gas Onshore, LP Well No: NBU 1022-10HT

43-047-40195

Location:

SENE, Sec.10, T10S, R22E

UTU-025187

Lease No:

Agreement: **Natural Buttes Unit**

Title	Name	Office Phone Number	Cell Phone Number
Petroleum Engineer:	Matt Baker	(435) 781-4490	(435) 828-4470
Petroleum Engineer:	Michael Lee	(435) 781-4432	(435) 828-7875
Petroleum Engineer:	Ryan Angus	(435) 781-4430	(435) 828-7368
Supervisory Petroleum Technician:	Jamie Sparger	(435) 781-4502	(435) 828-3913
Supervisory NRS:	Karl Wright	(435) 781-4484	
NRS/Enviro Scientist:	Holly Villa	(435) 781-4404	(435) 828-3544
NRS/Enviro Scientist:	James Hereford	(435) 781-3412	(435) 828-3546
NRS/Enviro Scientist:	Chuck Macdonald	(435) 781-4441	(435) 828-7481
NRS/Enviro Scientist:	Dan Emmett	(435) 781-3414	(435) 828-4029
NRS/Enviro Scientist:	Paul Percival	(435) 781-4493	(435) 828-7381
NRS/Enviro Scientist:	Anna Figueroa	(435) 781-3407	(435) 828-3548
NRS/Enviro Scientist:	Verlyn Pindell	(435) 781-3402	(435) 828-3547
NRS/Enviro Scientist:	Nathan Packer	(435) 781-3405	(435) 828-3545
NRS/Enviro Scientist:	David Gordon	(435) 781-4424	

Fax: (435) 781-3420

A COPY OF THESE CONDITIONS SHALL BE FURNISHED TO YOUR FIELD REPRESENTATIVE TO INSURE COMPLIANCE

All lease and/or unit operations are to be conducted in such a manner that full compliance is made with the applicable laws, regulations (43 CFR Part 3160), and this approved Application for Permit to Drill including Surface and Downhole Conditions of Approval. The operator is considered fully responsible for the actions of his subcontractors. A copy of the approved APD must be on location during construction, drilling, and completion operations. This permit is approved for a two (2) year period, or until lease expiration, whichever occurs first. An additional extension, up to two (2) years, may be applied for by sundry notice prior to expiration.

NOTIFICATION REQUIREMENTS

Location Construction (Notify Environmental Scientist)	-	Forty-Eight (48) hours prior to construction of location and access roads.
Location Completion (Notify Environmental Scientist)	-	Prior to moving on the drilling rig.
Spud Notice (Notify Petroleum Engineer)	-	Twenty-Four (24) hours prior to spudding the well.
Casing String & Cementing (Notify Supv. Petroleum Tech.)	-	Twenty-Four (24) hours prior to running casing and cementing all casing strings.
BOP & Related Equipment Tests (Notify Supv. Petroleum Tech.)	-	Twenty-Four (24) hours prior to initiating pressure tests.
First Production Notice (Notify Petroleum Engineer)	-	Within Five (5) business days after new well begins or production resumes after well has been off production for more than ninety (90) days.

Page 2 of 6 Well: NBU 1022-10HT 11/17/2008

SURFACE USE PROGRAM CONDITIONS OF APPROVAL (COAs)

- If there is an active Gilsonite mining operation within 2 miles of the well location, operator shall notify the Gilsonite operator at least 48 hours prior to any blasting during construction.
- If paleontological materials are uncovered during construction, the operator is to immediately stop work and contact the Authorized Officer (AO). A determination will be made by the AO as to what mitigation may be necessary for the discovered paleontologic material before construction can continue.

SITE SPECIFIC COAs:

Golden Eagle - January 1 through August 31 No drilling or construction during the above indicated dates unless nest is not active. Per recommendation of the BLM authorized agent.

Page 3 of 6 Well: NBU 1022-10HT

11/17/2008

DOWNHOLE PROGRAM CONDITIONS OF APPROVAL (COAs)

SITE SPECIFIC DOWNHOLE COAs:

- A copy of Kerr McGee's Standard Operating Practices (SOP version: dated 7/17/08 and approved 7/28/08) shall be on location.
- Drilling plan specifics and practices are referenced in the Kerr McGee Oil & Gas Standard
 Operating Procedures (SOP version: July 28, 2008). The operators drilling plan items 3 to 9
 reference the SOP. Kerr McGee shall adhere to the referenced requirements in the SOP.
 Kerr McGee and their contractors shall adhere to all Oil and Gas rules and requirements listed
 in the Code of Federal Regulations and all Federal Onshore Oil and Gas Orders except where
 variances have been granted.
- Covering air/gas drilling operations, requirements will be adhered to covering air/gas drilling operations as described in Onshore Order #2 III. E. 1. Drilling Operations, Special Drilling Operations, air/gas drilling.
- Production casing cement shall be brought up and into the surface casing. Production casing minimum cement top is 1200 ft. The minimum cement top is approximately 800 ft above the surface casing shoe.
 - Cmnt Top (TOC) standard will place cmnt behind casing across formation lost circulation zone, Birds Nest Zone.
 - COA specification fulfills operators performance standard stated in APD (where operators toc is calc'd with an excess to reach surface).
- A Gamma Ray well Log shall be run from the well Total Depth to the surface.
 A copy of the Gamma Ray well Log shall be submitted to the BLM Vernal Field Office.

All provisions outlined in Onshore Oil & Gas Order #2 Drilling Operations shall be strictly adhered to. The following items are emphasized:

DRILLING/COMPLETION/PRODUCING OPERATING STANDARDS

- The spud date and time shall be reported orally to Vernal Field Office within 24 hours of spudding.
- <u>Notify Vernal Field Office Supervisory Petroleum Engineering Technician at least 24 hours in</u> advance of casing cementing operations and BOPE & casing pressure tests.
- All requirements listed in Onshore Order #2 III. E. Special Drilling Operations are applicable for air drilling of surface hole.
- Blowout prevention equipment (BOPE) shall remain in use until the well is completed or abandoned. Closing unit controls shall remain unobstructed and readily accessible at all times. Choke manifolds shall be located outside of the rig substructure.

Page 4 of 6 Well: NBU 1022-10HT 11/17/2008

- All BOPE components shall be inspected daily and those inspections shall be recorded in the
 daily drilling report. Components shall be operated and tested as required by Onshore Oil &
 Gas Order No. 2 to insure good mechanical working order. All BOPE pressure tests shall be
 performed by a test pump with a chart recorder and <u>NOT</u> by the rig pumps. Test shall be
 reported in the driller's log.
- BOP drills shall be initially conducted by each drilling crew within 24 hours of drilling out from under the surface casing and weekly thereafter as specified in Onshore Oil & Gas Order No. 2.
- Casing pressure tests are required before drilling out from under all casing strings set and cemented in place.
- No aggressive/fresh hard-banded drill pipe shall be used within casing.
- Cement baskets shall not be run on surface casing.
- The operator must report all shows of water or water-bearing sands to the BLM. If flowing water
 is encountered it must be sampled, analyzed, and a copy of the analyses submitted to the BLM
 Vernal Field Office.
- The operator must report encounters of all non oil & gas mineral resources (such as Gilsonite, tar sands, oil shale, trona, etc.) to the Vernal Field Office, in writing, within 5 working days of each encounter. Each report shall include the well name/number, well location, date and depth (from KB or GL) of encounter, vertical footage of the encounter and, the name of the person making the report (along with a telephone number) should the BLM need to obtain additional information.
- A complete set of angular deviation and directional surveys of a directional well will be submitted to the Vernal BLM office engineer within 30 days of the completion of the well.
- While actively drilling, chronologic drilling progress reports shall be filed directly with the BLM,
 Vernal Field Office on a weekly basis in sundry, letter format or e-mail to the Petroleum
 Engineers until the well is completed.
- A cement bond log (CBL) will be run from the production casing shoe to the top of cement and shall be utilized to determine the bond quality for the production casing. Submit a field copy of the CBL to this office.
- Please submit an electronic copy of all other logs run on this well in LAS format to UT_VN_Welllogs@BLM.gov. This submission will supersede the requirement for submittal of paper logs to the BLM.
- There shall be no deviation from the proposed drilling, completion, and/or workover program as approved. Safe drilling and operating practices must be observed. Any changes in operation must have prior approval from the BLM Vernal Field Office.

Page 5 of 6 Well: NBU 1022-10HT 11/17/2008

OPERATING REQUIREMENT REMINDERS:

- All wells, whether drilling, producing, suspended, or abandoned, shall be identified in accordance with 43 CFR 3162.6. There shall be a sign or marker with the name of the operator, lease serial number, well number, and surveyed description of the well.
- In accordance with 43 CFR 3162.4-3, this well shall be reported on the "Monthly Report of Operations" (Oil and Gas Operations Report ((OGOR)) starting with the month in which operations commence and continue each month until the well is physically plugged and abandoned. This report shall be filed in duplicate, directly with the Minerals Management Service, P.O. Box 17110, Denver, Colorado 80217-0110, or call 1-800-525-7922 (303) 231-3650 for reporting information.
- Should the well be successfully completed for production, the BLM Vernal Field office must be
 notified when it is placed in a producing status. Such notification will be by written
 communication and must be received in this office by not later than the fifth business day
 following the date on which the well is placed on production. The notification shall provide, as a
 minimum, the following informational items:
 - o Operator name, address, and telephone number.
 - Well name and number.
 - Well location (¼¼, Sec., Twn, Rng, and P.M.).
 - Date well was placed in a producing status (date of first production for which royalty will be paid).
 - o The nature of the well's production, (i.e., crude oil, or crude oil and casing head gas, or natural gas and entrained liquid hydrocarbons).
 - o The Federal or Indian lease prefix and number on which the well is located; otherwise the non-Federal or non-Indian land category, i.e., State or private.
 - o Unit agreement and/or participating area name and number, if applicable.
 - o Communitization agreement number, if applicable.
- Any venting or flaring of gas shall be done in accordance with Notice to Lessees (NTL) 4A and needs prior approval from the BLM Vernal Field Office.
- All undesirable events (fires, accidents, blowouts, spills, discharges) as specified in NTL 3A will be reported to the BLM, Vernal Field Office. Major events, as defined in NTL3A, shall be reported verbally within 24 hours, followed by a written report within 15 days. "Other than Major Events" will be reported in writing within 15 days. "Minor Events" will be reported on the Monthly Report of Operations and Production.
- Whether the well is completed as a dry hole or as a producer, "Well Completion and Recompletion Report and Log" (BLM Form 3160-4) shall be submitted not later than 30 days after completion of the well or after completion of operations being performed, in accordance with 43 CFR 3162.4-1. Two copies of all logs run, core descriptions, and all other surveys or

Page 6 of 6 Well: NBU 1022-10HT 11/17/2008

data obtained and compiled during the drilling, workover, and/or completion operations, shall be filed on BLM Form 3160-4. Submit with the well completion report a geologic report including, at a minimum, formation tops, and a summary and conclusions. Also include deviation surveys, sample descriptions, strip logs, core data, drill stem test data, and results of production tests if performed. Samples (cuttings, fluid, and/or gas) shall be submitted only when requested by the BLM, Vernal Field Office.

- All off-lease storage, off-lease measurement, or commingling on-lease or off-lease, shall have prior written approval from the BLM Vernal Field Office.
- Oil and gas meters shall be calibrated in place prior to any deliveries. The BLM Vernal Field
 Office Petroleum Engineers will be provided with a date and time for the initial meter calibration
 and all future meter proving schedules. A copy of the meter calibration reports shall be
 submitted to the BLM Vernal Field Office. All measurement facilities will conform to the API
 standards for liquid hydrocarbons and the AGA standards for natural gas measurement. All
 measurement points shall be identified as the point of sale or allocation for royalty purposes.
- A schematic facilities diagram as required by Onshore Oil & Gas Order No. 3 shall be submitted
 to the BLM Vernal Field Office within 30 days of installation or first production, whichever occurs
 first. All site security regulations as specified in Onshore Oil & Gas Order No. 3 shall be
 adhered to. All product lines entering and leaving hydrocarbon storage tanks will be effectively
 sealed in accordance with Onshore Oil & Gas Order No. 3.
- Any additional construction, reconstruction, or alterations of facilities, including roads, gathering
 lines, batteries, etc., which will result in the disturbance of new ground, shall require the filing of
 a suitable plan and need prior approval of the BLM Vernal Field Office. Emergency approval
 may be obtained orally, but such approval does not waive the written report requirement.
- No location shall be constructed or moved, no well shall be plugged, and no drilling or workover
 equipment shall be removed from a well to be placed in a suspended status without prior
 approval of the BLM Vernal Field Office. If operations are to be suspended for more than 30
 days, prior approval of the BLM Vernal Field Office shall be obtained and notification given
 before resumption of operations.
- Pursuant to Onshore Oil & Gas Order No. 7, this is authorization for pit disposal of water produced from this well for a period of 90 days from the date of initial production. A permanent disposal method must be approved by this office and in operation prior to the end of this 90-day period. In order to meet this deadline, an application for the proposed permanent disposal method shall be submitted along with any necessary water analyses, as soon as possible, but no later than 45 days after the date of first production. Any method of disposal which has not been approved prior to the end of the authorized 90-day period will be considered as an Incident of Noncompliance and will be grounds for issuing a shut-in order until an acceptable manner for disposing of said water is provided and approved by this office.
- Unless the plugging is to take place immediately upon receipt of oral approval, the Field Office Petroleum Engineers must be notified at least 24 hours in advance of the plugging of the well, in order that a representative may witness plugging operations. If a well is suspended or abandoned, all pits must be fenced immediately until they are backfilled. The "Subsequent Report of Abandonment" (Form BLM 3160-5) must be submitted within 30 days after the actual plugging of the well bore, showing location of plugs, amount of cement in each, and amount of casing left in hole, and the current status of the surface restoration.

	STATE OF UTAH DEPARTMENT OF NATURAL RESOURCE		FORM 9
	5.LEASE DESIGNATION AND SERIAL NUMBER: UTU-025187		
SUND	RY NOTICES AND REPORTS	ON WELLS	6. IF INDIAN, ALLOTTEE OR TRIBE NAME:
	sals to drill new wells, significantly deeper igged wells, or to drill horizontal laterals.		7.UNIT or CA AGREEMENT NAME: NATURAL BUTTES
1. TYPE OF WELL Gas Well			8. WELL NAME and NUMBER: NBU 1022-10HT
2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ONS	HORE, L.P.		9. API NUMBER: 43047401950000
3. ADDRESS OF OPERATOR: P.O. Box 173779 1099 18th S	treet, Suite 600, Denver, CO, 80217 3779	PHONE NUMBER: 720 929-6007 Ext	9. FIELD and POOL or WILDCAT: NATURAL BUTTES
4. LOCATION OF WELL FOOTAGES AT SURFACE: 1798 FNL 0297 FEL			COUNTY: UINTAH
QTR/QTR, SECTION, TOWNSHI Qtr/Qtr: SENE Section: 10	P, RANGE, MERIDIAN: Township: 10.0S Range: 22.0E Meridian:	S	STATE: UTAH
11.	CK APPROPRIATE BOXES TO INDICA	TE NATURE OF NOTICE, REPORT,	OR OTHER DATA
TYPE OF SUBMISSION		TYPE OF ACTION	
	ACIDIZE	ALTER CASING	☐ CASING REPAIR
NOTICE OF INTENT Approximate date work will start: 7/10/2009	CHANGE TO PREVIOUS PLANS	CHANGE TUBING	CHANGE WELL NAME
7/10/2003	CHANGE WELL STATUS	COMMINGLE PRODUCING FORMATIONS	CONVERT WELL TYPE
SUBSEQUENT REPORT Date of Work Completion:	L DEEPEN	FRACTURE TREAT	☐ NEW CONSTRUCTION
·	OPERATOR CHANGE	☐ PLUG AND ABANDON	☐ PLUG BACK
SPUD REPORT	☐ PRODUCTION START OR RESUME	RECLAMATION OF WELL SITE	RECOMPLETE DIFFERENT FORMATION
Date of Spud:	☐ REPERFORATE CURRENT FORMATION	SIDETRACK TO REPAIR WELL	☐ TEMPORARY ABANDON
_	☐ TUBING REPAIR	☐ VENT OR FLARE	WATER DISPOSAL
DRILLING REPORT Report Date:	☐ WATER SHUTOFF	SI TA STATUS EXTENSION	✓ APD EXTENSION
	WILDCAT WELL DETERMINATION	OTHER	OTHER:
Kerr-McGee Oil & Ga extension to this A	MPLETED OPERATIONS. Clearly show all peess Onshore, L.P. (Kerr-McGee PD for the maximum time allowith any questions and/or cor	e) respectfully requests an owed. Please contact the nments. Thank you.	Approved by the Utah Division of Oil, Gas and Mining Pate: July 13, 2009
NAME (PLEASE PRINT) Danielle Piernot	PHONE NUMBER 720 929-6156	R TITLE Regulatory Analyst	
SIGNATURE N/A		DATE 7/7/2009	



The Utah Division of Oil, Gas, and Mining

- State of Utah
- Department of Natural Resources

Electronic Permitting System - Sundry Notices

Request for Permit Extension Validation Well Number 43047401950000

API: 43047401950000 **Well Name:** NBU 1022-10HT

Location: 1798 FNL 0297 FEL QTR SENE SEC 10 TWNP 100S RNG 220E MER S

Company Permit Issued to: KERR-MCGEE OIL & GAS ONSHORE, L.P.

Date Original Permit Issued: 7/16/2008

The undersigned as owner with legal rights to drill on the property as permitted above, hereby verifies that the information as submitted in the previously approved application to drill, remains valid and does not require revision. Following is a checklist of some items related to the application, which should be verified.

me revision. I onlywing is a checklist of some items related to the application, which should be verified.
 If located on private land, has the ownership changed, if so, has the surface agreement been updated? Yes No
• Have any wells been drilled in the vicinity of the proposed well which would affect the spacing or siting requirements for this location? Yes No
 Has there been any unit or other agreements put in place that could affect the permitting or operation of this proposed well? Yes No
 Have there been any changes to the access route including ownership, or rightof- way, which could affect the proposed location? Yes No
• Has the approved source of water for drilling changed? Yes No
 Have there been any physical changes to the surface location or access route which will require a change in plans from what was discussed at the onsite evaluation? Yes No
• Is bonding still in place, which covers this proposed well? • Yes Oil, Gas and Mining

Signature: Danielle Piernot **Date:** 7/7/2009

Title: Regulatory Analyst Representing: KERR-MCGEE OIL & GAS ONSHORD July 13, 2009

Bv:

DIVISION OF OIL, GAS AND MINING

SPUDDING INFORMATION

Name of Co	mpany:	KERR-McGEE OIL & GAS ONSHORE, L.P.					
Well Name	:	NBU 1022	2-10HT				
Api No <u>:</u>	43-047-40	195		Lease Ty	pe:	FEDERAL	
Section 10	Township	10S Range_	22E	County	UIN	TAH	
Drilling Cor	ntractor	PETE MART	IN DRL	G RIC	3 #	BUCKET	
SPUDDE	D:						
	Date	11/12/2009					
	Time	11:00 AM					
	How	DRY					
Drilling w	ill Commer	ıce:			-		
Reported by		JAME	S GOBE	L			
Telephone#	****	(435) 8	328-7024				
Date	11/12/2009	Signed	CHD				

STATE OF UTAH			FORM 9		
	5.LEASE DESIGNATION AND SERIAL NUMBER: UTU-025187				
SUND	6. IF INDIAN, ALLOTTEE OR TRIBE NAME:				
	sals to drill new wells, significantly deepe ugged wells, or to drill horizontal laterals.		7.UNIT or CA AGREEMENT NAME: NATURAL BUTTES		
1. TYPE OF WELL Gas Well			8. WELL NAME and NUMBER: NBU 1022-10HT		
2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ONS	HORE, L.P.		9. API NUMBER: 43047401950000		
3. ADDRESS OF OPERATOR: P.O. Box 173779 1099 18th S	itreet, Suite 600, Denver, CO, 80217 377	PHONE NUMBER: '9 720 929-6007 Ext	9. FIELD and POOL or WILDCAT: NATURAL BUTTES		
4. LOCATION OF WELL FOOTAGES AT SURFACE: 1798 FNL 0297 FEL OTR/OTR, SECTION, TOWNSH	TD DANCE MEDIDIAN.		COUNTY: UINTAH		
	Township: 10.0S Range: 22.0E Meridian:	: S	STATE: UTAH		
11. CHE	CK APPROPRIATE BOXES TO INDICA	ATE NATURE OF NOTICE, REPORT,	OR OTHER DATA		
TYPE OF SUBMISSION	TYPE OF ACTION				
	ACIDIZE	ALTER CASING	CASING REPAIR		
NOTICE OF INTENT Approximate date work will start:	CHANGE TO PREVIOUS PLANS CHANGE WELL STATUS	☐ CHANGE TUBING ☐ COMMINGLE PRODUCING FORMATIONS	☐ CHANGE WELL NAME ☐ CONVERT WELL TYPE		
SUBSEQUENT REPORT Date of Work Completion:	DEEPEN	FRACTURE TREAT	□ NEW CONSTRUCTION		
	OPERATOR CHANGE	PLUG AND ABANDON	☐ PLUG BACK		
✓ SPUD REPORT	PRODUCTION START OR RESUME	RECLAMATION OF WELL SITE	RECOMPLETE DIFFERENT FORMATION		
Date of Spud: 11/12/2009	REPERFORATE CURRENT FORMATION	SIDETRACK TO REPAIR WELL	TEMPORARY ABANDON		
	☐ TUBING REPAIR	☐ VENT OR FLARE	WATER DISPOSAL		
DRILLING REPORT Report Date:	WATER SHUTOFF	SI TA STATUS EXTENSION	APD EXTENSION		
	WILDCAT WELL DETERMINATION	OTHER	OTHER:		
12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc. MIRU PETE MARTIN BUCKET RIG. DRILLED 20" CONDUCTOR HOLE TO 40'. RAN 14" 36.7# SCHEDULE 10 PIPE. CMT W/28 SX READY MIX. SPUD WELLAccepted by the LOCATION ON 11/12/2009 AT 12:30 HRS. Utah Division of Oil, Gas and Mining FOR RECORD November 16, 2009					
NAME (PLEASE PRINT) Andy Lytle	PHONE NUMBE 720 929-6100	R TITLE Regulatory Analyst			
SIGNATURE N/A		DATE 11/16/2009			

STATE OF UTAH			FORM 9		
	5.LEASE DESIGNATION AND SERIAL NUMBER: UTU-025187				
SUND	RY NOTICES AND REPORTS	ON WELLS	6. IF INDIAN, ALLOTTEE OR TRIBE NAME:		
	sals to drill new wells, significantly deepen o gged wells, or to drill horizontal laterals. Us		7.UNIT or CA AGREEMENT NAME: NATURAL BUTTES		
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3. ADDRESS OF OPERATOR: P.O. Box 173779 1099 18th S	treet, Suite 600, Denver, CO, 80217 3779	PHONE NUMBER: 720 929-6007 Ext	9. FIELD and POOL or WILDCAT: NATURAL BUTTES		
4. LOCATION OF WELL FOOTAGES AT SURFACE: 1798 FNL 0297 FEL			COUNTY: UINTAH		
QTR/QTR, SECTION, TOWNSHI Qtr/Qtr: SENE Section: 10		STATE: UTAH			
CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA					
TYPE OF SUBMISSION	TYPE OF ACTION				
	ACIDIZE	ALTER CASING	CASING REPAIR		
☐ NOTICE OF INTENT	CHANGE TO PREVIOUS PLANS	☐ CHANGE TUBING	CHANGE WELL NAME		
Approximate date work will start:	CHANGE WELL STATUS	COMMINGLE PRODUCING FORMATIONS	CONVERT WELL TYPE		
SUBSEQUENT REPORT Date of Work Completion:	DEEPEN	FRACTURE TREAT	☐ NEW CONSTRUCTION		
	OPERATOR CHANGE	PLUG AND ABANDON	☐ PLUG BACK		
SPUD REPORT	PRODUCTION START OR RESUME	RECLAMATION OF WELL SITE	RECOMPLETE DIFFERENT FORMATION		
Date of Spud:	REPERFORATE CURRENT FORMATION	SIDETRACK TO REPAIR WELL	☐ TEMPORARY ABANDON		
	☐ TUBING REPAIR	☐ VENT OR FLARE	☐ WATER DISPOSAL		
✓ DRILLING REPORT Report Date:	☐ WATER SHUTOFF	SI TA STATUS EXTENSION	APD EXTENSION		
11/15/2009	☐ WILDCAT WELL DETERMINATION	OTHER	OTHER:		
12 DESCRIBE PROPOSED OF CO			'		
12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc. MIRU PROPETRO AIR RIG ON 11/13/2009. DRILLED 12-1/4" SURFACE HOLE TO 1650'. RAN 9-5/8" 36# J-55 SURFACE CASING. PUMP 110 BBLS OF Accepted by the WATER AHEAD. PUMP 20 BBLS OF GEL WATER. LEAD CMT W/300 SX CLASSUtah Division of G HI FILL @ 13.1 PPG, 1.69 YIELD. PUMP 250 SX CLASS G PREM LITE TAILOG, Gas and Mining 15.8 PPG, 1.15 YIELD. DROP PLUG ON FLY, DISPLACE W/121 BBLS OF GRANGE RECORD ONLY WATER, 480 PSI OF LIFT @ 3 BBLS/MIN, NO CMT TO SURFACE. BUMP PLUG 900 PSI. FLOAT HELD. PUMP 75 SX CLASS G PREM LITE TOP OUT @ 15.8 PPG, 1.15 YIELD DOWN BACKSIDE OF CSG. NO CMT TO SURFACE. CMT APPROX 300' DOWN. WAIT 2 HRS AND TOP OUT #2 W/150 SX OF SAME CMT. CMT TO SURFACE AND STAYED. WORT.					
Andy Lytle	720 929-6100	Regulatory Analyst			
SIGNATURE N/A		DATE 11/16/2009			

STATE OF UTAH DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING			FORM 9	
			5.LEASE DESIGNATION AND SERIAL NUMBER: UTU-025187	
SUNDE	6. IF INDIAN, ALLOTTEE OR TRIBE NAME:			
Do not use this form for propos bottom-hole depth, reenter plu DRILL form for such proposals.	existing wells below current se APPLICATION FOR PERMIT TO	7.UNIT or CA AGREEMENT NAME: NATURAL BUTTES		
1. TYPE OF WELL Gas Well			8. WELL NAME and NUMBER: NBU 1022-10HT	
2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ONSI	HORE, L.P.		9. API NUMBER: 43047401950000	
3. ADDRESS OF OPERATOR: P.O. Box 173779 1099 18th S	treet, Suite 600, Denver, CO, 80217 3779	PHONE NUMBER: 720 929-6007 Ext	9. FIELD and POOL or WILDCAT: NATURAL BUTTES	
4. LOCATION OF WELL FOOTAGES AT SURFACE: 1798 FNL 0297 FEL QTR/QTR, SECTION, TOWNSHI Otr/Otr: SENE Section: 10	I P, RANGE, MERIDIAN: Township: 10.0S Range: 22.0E Meridian: S		COUNTY: UINTAH STATE: UTAH	
11.	<u> </u>			
TYPE OF SUBMISSION	CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA TYPE OF SUBMISSION TYPE OF ACTION			
	ACIDIZE	ALTER CASING	CASING REPAIR	
NOTICE OF INTENT Approximate date work will start:	CHANGE TO PREVIOUS PLANS	CHANGE TUBING	CHANGE WELL NAME	
SUBSEQUENT REPORT	CHANGE WELL STATUS DEEPEN	COMMINGLE PRODUCING FORMATIONS FRACTURE TREAT	CONVERT WELL TYPE	
Date of Work Completion:	☐ OPERATOR CHANGE	PLUG AND ABANDON	☐ NEW CONSTRUCTION ☐ PLUG BACK	
☐ SPUD REPORT	PRODUCTION START OR RESUME	RECLAMATION OF WELL SITE	RECOMPLETE DIFFERENT FORMATION	
Date of Spud:	☐ REPERFORATE CURRENT FORMATION	SIDETRACK TO REPAIR WELL	TEMPORARY ABANDON	
	☐ TUBING REPAIR	☐ VENT OR FLARE	☐ WATER DISPOSAL	
✓ DRILLING REPORT Report Date:	☐ WATER SHUTOFF	SI TA STATUS EXTENSION	APD EXTENSION	
12/2/2009	☐ WILDCAT WELL DETERMINATION	OTHER	OTHER:	
12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc. FINISHED DRILLING FROM 1650' TO 8283' ON 11/30/2009. RAN 4-1/2" 11.6# I-80 PRODUCTION CSG. PUMP 40 BBLS DYE WATER. LEAD CMT W/39Accepted by the SX CLASS G PREM @ 11.5 PPG, 2.7 YIELD. TAILED CMT W/1100 SX CLASS (Utah Division of @ 14.3 PPG, 1.31 YIELD. DROP PLUG & DISPLACE W/127.8 BBLS WATEROII, Gas and Mining BUMP PLUG W/3050 PSI, FINAL LIFT PSI OF 2450, FLOATS HELD, FEOR RECORD ONLY RETURNS THROUGHOUT JOB W/17 BBLS CMT TO PIT & 1.5 BACK TO TRUCK. WASH STACK & LAND CASING W/60K, R/D CEMENTERS, L/D LANDING JT. N/D. RELEASE PIONEER 69 RIG ON 12/2/2009 AT 18:00 HRS.				
NAME (PLEASE PRINT) Andy Lytle	PHONE NUMBER 720 929-6100	TITLE Regulatory Analyst		
SIGNATURE N/A		DATE 12/3/2009		

			FORM O								
	STATE OF UTAH		FORM 9								
	DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING SUNDRY NOTICES AND REPORTS ON WELLS										
SUNDE	6. IF INDIAN, ALLOTTEE OR TRIBE NAME:										
Do not use this form for proposition-hole depth, reenter plu DRILL form for such proposals.	7.UNIT or CA AGREEMENT NAME: NATURAL BUTTES										
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11. CHE	CK APPROPRIATE BOXES TO INDICATE N	ATURE OF NOTICE, REPORT,	OR OTHER DATA								
TYPE OF SUBMISSION		TYPE OF ACTION									
	ACIDIZE	ALTER CASING	CASING REPAIR								
□ NOTICE OF INTENT	☐ CHANGE TO PREVIOUS PLANS	CHANGE TUBING	CHANGE WELL NAME								
Approximate date work will start:	CHANGE WELL STATUS	COMMINGLE PRODUCING FORMATIONS	CONVERT WELL TYPE								
SUBSEQUENT REPORT	DEEPEN	FRACTURE TREAT	NEW CONSTRUCTION								
Date of Work Completion:	OPERATOR CHANGE	PLUG AND ABANDON	PLUG BACK								
	✓ PRODUCTION START OR RESUME	RECLAMATION OF WELL SITE	RECOMPLETE DIFFERENT FORMATION								
SPUD REPORT Date of Spud:	REPERFORATE CURRENT FORMATION	SIDETRACK TO REPAIR WELL	TEMPORARY ABANDON								
	TUBING REPAIR	VENT OR FLARE	WATER DISPOSAL								
✓ DRILLING REPORT		SI TA STATUS EXTENSION	APD EXTENSION								
Report Date: 1/4/2010		OTHER	OTHER:								
THE SUBJECT WELL \	MPLETED OPERATIONS. Clearly show all pertinent WAS PLACED ON PRODUCTION CONTROL TO THAT ATTACHED CHRONOLCONG TO THAT ATTACHED CHRONOLCONG TO THAT ATTACHED CHRONOLCONG TO THAT ATTACHED CHRONOLCONG THAT	ON 01/04/2010 AT 3:00 DIGICAL WELL HISTORYA COIL FOR									
Andy Lytle	720 929-6100	Regulatory Analyst									
SIGNATURE N/A		DATE 1/5/2010									

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Well: NBU 1022-10HT Spud Co Project: UTAH-UINTAH Site: NB					- 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1		2009	Spud Date: 11/13/2009
<u> </u>		1		Site: NB	U 293 P	AD		Rig Name No: PIONEER 69/69, PROPETRO/
vent: DRILLIN				Start Da				End Date: 12/2/2009
ctive Datum: F evel)	RKB @4	1,809.00ft ((above Mea	in Sea	UWI: 0	/10/S/2:	2/E/10/0/S	ENE/26/PM/N/1,798.00/E/0/297.00/0/0
	er priest in oraș de social de	and the second second		7 8 22 8 Y	10000	Tsee		
11/13/2009	6.00	- 14:00	8.00	MIRU	01	<u> </u>	Р	A CONTROL OF THE CONT
			0.00		UI.	Α		MOVE RIG FROM NBU 920-12-F. APPROX 20 MILES. WAIT FOR LOCATION TO BE READY MOVE FROM 12:00 TO 14:00.
	14:00	- 18:30	4.50	MIRU	01	В	P	DRESS CONDUCTOR AND INSTALL AIR BOWL, BOWIE LINE. RIG UP RIG, BUILD DITCH, RIG UP PUMP. P/U AIR HAMMER
	18:30	- 20:30	2.00	DRLSUR	02	Α	Р	AIR SPUD 11/13/2009 18:30, AIR HAMMER 64' 180
11/14/2009		- 0:00 - 2:00	3.50 2.00	DRLSUR	06 08	A B	P Z	LD AIR HAMMER, PU HUNTING 1.5 DEG BENT HOUSE MOTOR SN 8049. M/U HC507Z SN 7008622 (2ND RUN) SCRIBE MOTOR AND P/U SCIENTIFIC DRILLING DIRECTIONAL TOOLS. INSTALL AIR BOWL RUBBER. PRIME PUMPS.
11/14/2009		- 19:00	17.00	DRLSUR	02	D	P	WORK ON PUMP AND PRIME PUMP. DRILL SLIDE 180'-1650'(1470', 86'/HR) TD
								11/14/2009 19:00. WOB 20K RPM 45, MOTOR RPM 104, GPM 650, ON/OFF PSI- 1400/1700 UP/DOWN/ROT=65/62/64 LOSS CIRC 1120' STARTED AERATING WATER. DRILLED INTO WATER ZONE 1150'. WATER FLOW OF 16 BBLS A MIN. RESERVE PIT FILLING ABOUT 1' AN HOUR. TD WELL 50' EARLY TO ATTEMPT TO CONTROL WATER FLOW.
	19:00	- 19:30	0.50	CSG	05	В	Χ	PUMP 130 BBLS OF 11.6 MUD TO CONTROL WATER FLOW. RESERVE PIT 90% FULL. RESERVE PIT 2' FROM TOP.
	19:30	- 22:00	2.50	CSG	06	D	X	LDDS, LD 12-6" COLLARS, WELL STARTED FLOWING 16 BBLS MIN. TRIED PUMPING 30 BBLS OF 12.6# MUD @ 200', WOULD NOT KILL WELL. REINSTALL RUBBER, TRIP BACK IN W/ 600' OF DP.
	22:00	- 22:30	0.50	CSG	05	В	Χ	PUMP 50 BBLS OF 12.6 MUD TILL WELL STOPPED FLOWING: PIT 95% FULL:
	22:30	- 0:00	1.50	CSG	06	D	Р	TRIPPED OUT LAYING DOWN DP, FILLING HOLE W/ 10 BBLS 12.6 MUD EVERY 200'. PIT 85% FULL @ MIDNIGHT.
11/15/2009	0:00	- 2:00	2.00	CSG	06	D	P	LD DIRECTIONAL TOOLS, FILL DOWN HOLE 40 BBLSW/ 12.6# MUD. LOAD UP DIRECTIONAL TOOLS ON TRUCK AND SHIP OFF.
	2.00	- 6:00	4.00	CSG	12	С	Р	RUN 37 JTS OF 9-5/8" 36# J-55 CSG TO 1638' KB, BAFFLE PLATE RAN IN TOP OF SHOE JT LANDED @ 1592'. FILL CSG 800'.
	6:00	- 7:00	1.00	RDMO	01	E	P	RIG DOWN RIG AND READY FOR LONG MOVE. RIG RELEASE 11/15/2009 07:30
	7:30	- 11:00	3.50	CSG	12		P	PRESSURE TEST TO 2000 PSI, PUMP 110 BBLS OF WATER AHEAD, PUMP 20 BBLS OF GEL WATER, START 300 SX (90 BBLS) OF LEAD CEMENT 13.1#, 1.69 YD, 8.8 GAL/SK. (65% CEM, 35% POZ) PUMP 250 SX(51 BBLS) OF 15.8#, 1.15 YD, 5 GAL/SK. DROP PLUG ON FLY, DISPLACE W/ 121 BBLS OF 8.3# WATER. 480 PSI OF LIFT @ 3 BBLS/MIN NO CEMENT TO SURFACE BUMP PLUG 900 PSI. FOAT HELD. PUMP 75 SX(15.3 BBLS) OF 15.8# 4% CALC2 1.5 YD 5 GAL SK DOWN BACKSIDE OF CSG. NO CEMENT SURFACE. CEMENT APPROX 300' DOWN. WAIT 2 HRS AND TOP OUT W/ 150 SX (30.7 BBLS) OF SAME CEMENT. CEMENT TO SURFACE AND

1/5/2010

1:24:05PM

Vell: NBU 102	2-10HT			Spud Co	onducto	r: 11/12	/2009 Sp	ud Date: 11/13/2009
Project: UTAH-	UINTAL	1		Site: NB	U 293 F	PAD		Rig Name No: PIONEER 69/69, PROPETRO/
vent: DRILLIN	IG			Start Da	te: 4/21	/2009		End Date: 12/2/2009
ctive Datum: F	RKB @4	,809.00ft (a	above Mea		1000 1000		2/E/10/0/SENE	E/26/PM/N/1,798.00/E/0/297.00/0/0
evel)								
					(Code			
11/26/2009	4:00	- 7:00	3.00	DRLPRO	01	E	P	RDRT
		- 17:00	10.00	DRLPRO	01	Ā	P	등이 바다이 나타를 잃었다면 일반을 통하면 하는 이 이렇게 되고 있다.
								MOVE RIG 12.8 MILES TO NBU 1022-10HT, 8 HAUL TRUCKS,4 BED TRUCKS,1 CRANE, NO EXTRA RIG HANDS
	17:00	- 0:00	7.00	DRLPRO	01	В	P	RURT, REMOVE 14" SPOOL & REPLACE W/ 21" SPACER SPOOL DO TO MATTING BOARDS, 100%
11/27/2009	0:00	- 1:00	1.00	DRLPRO	01	В	P	MOVED, 90% RIGGED UP FINISH R/U
	1:00	- 5:00	4.00	DRLPRO	14	Ā	Р	N/U BOPE, CHANGE OUT 14" SPOOL F/ 24"
	5:00	- 12:30	7.50	DRLPRO	15	Α	P	TEST BOPE, RAMS & ALL VALVES 250 LOW-5000
		- 16:00	3.50	DRLPRO	06	Α	P	HIGH, ANN 250-5000, CASING 1500 F/ 30 MIN HPJSM W/ RIG & P/U CREWS,P/U BIT #1, MM, DIR
	16:00	- 19:00	2.00	DDI DDO	00			TOOLS & SCRIBE, P/U 31 JTS D/P, R/D
	10.00	- 19.00	3.00	DRLPRO	09	Α	P	CUT & SLIP 85' DRLG LINE, INSTALL ROT RUBBER, KELLY DRIVE BUSHINGS, TORQUE KELLY, CENTER STACK, PRE-SPUD INSECTION
		- 20:30	1.50	DRLPRO	02	F	P	DRLG CEMENT, F/E, SHOE & OPEN HOLE TO
	20:30	- 0:00	3.50	DRLPRO	02	В	P	SPUD WELL @ 20:30 11/27/09, DRLG, SLIDE & SURVEY F/ 1664 TO 2149', 485' @ 138.6' PH, CIRC RESERVE PIT W/ GEL & POLY SWEEPS, SLIDES
11/28/2009	0:00	- 14:00	14.00	DRLPRO	02	В	P	- 1900-1910 DRLG F/ 2149 TO 3918' 1769' @ 126.6' PH, CIRC RESERVE PIT W/ GELL & POLY SWEEPS, SLIDES 2182-2192, 3034-3044, 3887-3897
	14:00	- 14:30	0.50	DRLPRO	07	Α	P	SERVICE RIG
		- 0:00	9.50	DRLPRO	02	В	P	DRLG F/ 3918 TO 5025', 2876' @ 122.4' PH, WOB 10-18, RPM 50, MM 98, SPM 125, GPM 473, UP/DW/ROT 135-120-130, ON/OFF 1750-1550, DIFF 150-250, CIRC RESERVE PIT W/ GEL & POLY SWEEPS, SLIDES 4045-4070, 4841-4853
11/29/2009		- 12:00	12.00	DRLPRO	02	В	P	DRLG F/ 5025 TO 6164', 1139' @ 94.9' PH
	12:00	- 12:30	0.50	DRLPRO	07	Α	Р	SERVICE RIG
	12:30	- 0:00	11.50	DRLPRO	02	В	P	DRLG F/ 6164 TO 6987', 823' @ 71.6' PH, MW/ 9.3, VIS 30, WOB 20, RPM 50, MM 98, SPM 125, GPM
								473, PU/SO/ROT 170-140-160, ON/OFF 1900-1700, DIFF 150-250, SLIDES 6750-6765
11/30/2009	0:00	- 7:00	7.00	DRLPRO	02	В	Р	DRLG F/ 6987 TO 7429',442' @ 63.1' PH
	7:00	- 7:30	0.50	DRLPRO	03	Α	P	WORK TIGHT CONN @ 7429'
		- 14:00	6.50	DRLPRO	02	В	Р	DRLG F/ 7429 TO 7820', 391' @ 60.2' PH
		- 14:30	0.50	DRLPRO	07	Α	Р	SERVICE RIG
		- 23:30	9.00	DRLPRO	02	В	P	DRLG F/ 7820 TO 8283' MD-TD, TVD 8281', 463' @ 51.4' PH, MW 11.3, VIS 50, WOB 22, RPM 50, MM 98, SPM 125, GPM 473, PU/SO/ROT 182-151-163, ON/OFF 2750-2600, DIFF 150-250
	23:30	- 0:00	0.50	DRLPRO	05	С	Р	CIRC OUT GAS, RAISE MW TO 11.5
12/1/2009	0:00	- 1:30	1.50	DRLPRO	05	A	P	CIRC HOLE CLEAN, RAISE M/W TO 11.5
		- 7:00	5.50	DRLPRO	06	В	P	POOH F/ LOGS, WIPED ALL TIGHT SPOTS CLEAN, PULL ROT RUBBER, L/D DIR TOOLS,MM
	7:00	- 14:30	7.50	DRLPRO	11	c	P	BIT HPJSM W/ RIG & LOGGING CREWS, R/U & RUN TRIPLE COMBO F/8259', CALIPER STOPPED WORKING @ 2700', POOH, R/D
		- 18:30	4.00	DRLPRO	06	Α	P	P/U CONE BIT & BIT SUB, TIH, WASH & REAM 75' TO BOTTOM W/ 15' FILL
		- 20:00	1.50	DRLPRO	05	Α	Р	CIRC OUT GAS TO LDDS
		- 0:00	4.00	DRLPRO	06		P	

1/5/2010 1:24:05PM

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Well: NBU 102	22-10HT			Spud Co	onducto	r: 11/12	2/2009 Spt	ud Date: 11/13/2009
Project: UTAH	I-UINTAI	1		Site: NB	U 293 F	PAD		Rig Name No: PIONEER 69/69, PROPETRO/
Event: DRILLI	NG			Start Da	te: 4/21	/2009		End Date: 12/2/2009
Active Datum: Level)	RKB @4	1,809.00ft (a	above Mea	n Sea	UWI: 0)/10/S/2	22/E/10/0/SENE	/26/PM/N/1,798.00/E/0/297.00/0/0
			Corpus Corp		Labery.	Telef Cleve		
12/2/2009	0:00	- 1:00	1.00	DRLPRO	06	Α	Р	L/D BHA & PULL WEAR BUSHING
	1:00	- 8:30	7.50	DRLPRO	12	С	P	HPJSM W/ RIG & CASING CREWS, R/U & RUN 8263' 4.5" I-80 BTC PROD CASING, WASH DOWN LAST 30', R/D
	8:30	.0.00	1.50	DRLPRO	05	Α	Ρ	CIRC & COND HOLE TO CEMENT
		- 14:00 - 18:00	4.00	DRLPRO	12 14	E	P P	HPJSM W/ RIG & CEMENT CREWS, R/U & PSI TEST LINES TO 3700, PUMP 40 BBLS DYE WATER, LEAD 390 SXS 11.5 PPG 2.7 YLD, TAIL 1100 SXS 14.3 PPG 1.31 YLD, DROP PLUG & DISPLACE W/ 127.8 BBLS WATER, BUMP PLUG W/ 3050 PSI, FINAL LIFT PSI OF 2450, FLOATS HELD, FULL RETURNS THOUGH OUT JOB W/ 17 BBLS CEMENT TO PIT & 1.5 BACK TO TRUCK, WASH STACK & LAND CASING W/ 60K, R/D CEMENTERS, L/D LANDING JT N/D & RELEASE RIG @ 18:00 12/2/09 TO THE NBI 1022-3DT

Vell: NBU 102	2-10HT		Augustalia (Spud Co	onductor	: 11/12	/2009	Spud Date: 11/13/2009
roject: UTAH-	UINTAH	1		Site: NB	U 293 P	AD		Rig Name No: LEED 733/733
vent: COMPL	ETION			Start Da	te: 12/14	1/2009		End Date: 12/24/2009
ctive Datum: I	RKB @4	,809.00ft (a	bove Mea		A		2/E/10/0/	/SENE/26/PM/N/1,798.00/E/0/297.00/0/0
evel)		HARATE						
12/14/2009	6:45	- 7:00	0.25	COMP	48		Р	JSA-ROADING RIG. RUSU.
		- 13:30	6.50	COMP	30	Α	Р	ROAD RIG AND EQUIP FROM BONANZA 1023-6H TO LOCATION. RUSU.
		- 17:30	4.00	COMP	31		P	ND WH. NU BOP. RU FLOOR AND TBG EQUIP. MU 3-7/8" MILL AND BIT SUB, RIH AS MEAS AND PU 148-JTS 2-3/8" J-55 TBG TO 4694'. POOH W/ 4: JTS TBG. 106-JTS IN, EOT AT 3363'. SDFN. WINTERIZE EQUIP.
12/15/2009		- 7:00	0.25	COMP	48		Р	JSA- P-TEST, PERF
	7:00	15:00	8.00	COMP	31		P	SITP 0, SICP 0. OPEN UP WELL. FIN POOH W/ 106-JTS 2-3/8" TBG. LD BIT SUB AND MILL. RD FLOOR. ND BOP. NU FRAC VALVES. HOOK UP ACTION HOT OIL. FILL CSG W/8 BBLS AND PRES TO 2000#. MIRU B & C. P-TEST VALVES AND CSG TO 7000#. GOOD. MIRU CASED HOLE EWL. RIH W/ 3-1/8" EXP GUN (23 GRAM, .36 EHD, 40" PENT 4 SPF ON 90*). PERF 7958'-63', 7875'-78', 7781'-82' (9' NET, 36 HOLES). POOH W/ EWL. WINTERIZE WH.
12/16/2009		-			46	F		WAITING ON SUPERIOR FRAC CREW.
12/17/2009	6:45	- 7:00	0.25	COMP	48		P	JSA- FRAC AND PERF
		- 13:50	6.83	COMP	46	E	Р	MIRU SUPERIOR FRAC COMPANY. HSM. P-TEST LINES TO 8000#.
	13:50	- 15:00	1.17	COMP	36	В		FRAC STG #1 7781'-7963' OPEN WELL W/ 1500#, BD 3114 AT 2.4 BPM. ISIP 2676, FG .77. PMP PRE-PAD (SC INHIB) AND PAD 4135# AT 49.2 BPM, 100% OPEN. MP 5261, MR 51.2, AP 4071, AR 50. PMP 2818 BBL SLK WTR, 105,551# 30/50, TAILED IN 5000# 20/40 RESIN (TOT PROP 110,551#). ISIP 3010, NPI 334, FG .82.
	15:00	- 16:15	1.25	COMP	37	В	Р	PERF STG #2
								RIH W/ 4-1/2" HALCO CBP AND 3-1/8" EXP GUN (23 GRAM, .36 EHD, 40" PENT, 4 SPF ON 90*) SET CBP AT 7631'. PU AND PERF 7596'-7601', 7440'-41', 7420'-23'. POOH
	16:15	- 17:00	0.75	COMP	36	В	P	FRAC STG #2 7420'-7601' OPEN WELL W/ 2385#. BD 4428# AT 4.5 BPM, ISIF 3583, FG .91. PMP PAD 4657# AT 41, 100% OPEN MP 5333, MR 42.3, AP 4595, AR 40. PMP 1078 BBI SLK WTR, 37,479# 30/50 AND 5000# 20/40 RESIN (TOT PROP 42,479#). ISIP 3021#, NPI -562, FG .84
		- 18:30	1.50	COMP	37	В	P	(TAILED IN FLUSH W/ 15 BBL 10# BRINE) PERF STG #3 RIH W/ 4-1/2" HALCO CBP AND 3-1/8" EXP GUN (23 GRAM, .36 EHD, 40" PENT, 3 SPF ON 120* AND 4 SPF ON 90*). SET CBP AT 6998". PU AND PERF 6964"-68' (4 SPF), 6893'-95' (4 SPF), 6780'-82' 3 SPF), 6717'-18' (3 SPF), 6679'-80' (3 SPF). POOH AND WINTERIZE EQUIP.
12/18/2009	1947年,但第	- 8:15	0.25	COMP	48	F	P	JSA- FRAC AND PERF
	8:15	- 10:15	2.00	COMP	46	F	Z	OPEN UP WELL. HAVE SOME FROZEN LINES. CLEAR LINES. P-TEST TO 8000#.

1/5/2010 1:25:33PM

rojoot: LITALI	1.116 177 4 .					: 11/12/		d Date: 11/13/2009
roject: UTAH-	<u> </u>	<u>'</u>		- 17	8U 293 P	drej jaken		Rig Name No: LEED 733/733
vent: COMPL					ite: 12/14			End Date: 12/24/2009
ctive Datum: (evel)	RKB @4	,809.00ft (a	above Mear	n Sea	UWI: 0	/10/S/2	2/E/10/0/SENE/	/26/PM/N/1,798.00/E/0/297.00/0/0
Yery.		5. %		Pass	Sant			\$55.44.75 (A.1.74)
·	10.45	999	685			Cox		
		- 11:15	1.00	COMP	36	B	P	FRAC STG #3 6964'-6680' OPEN WELL W/ 1590#. BD 3152# AT 4.5 BPM. ISIF 3583#, FG .75. PMP PAD. 3811# AT 41, 100% OPEN. MP 4642, MR 41.3, AP 3667, AR 40. PMP 1486 BBLS SLK WTR. 57,381# 30/50 AND 5000# 20/40 RESIN COATED (TOT PROP 62,381#). ISIP 2935, NPI 783, FG .86.
	11:15	- 12:15	1.00	COMP	37	В	P	PERF STG #4
								RIH W/ 4-1/2" HALCO CBP AND 3-1/8" EXP GUN (23 GRAM, .36 EHD, 40" PENT, 3 SPF ON 120* AND 4 SPF ON 90*). SET CBP AT 6661'. PU AND PERF 6628'-31' (4 SPF), 6606'-08' (4 SPF), 6578'-8((3 SPF), 6538'-40' (3 SPF), 6500'-01' (3 SPF), 6487'-88' (4 SPF). POOH
		- 13:40	1.42	COMP	36	В	(P	FRAC STG #4 6487'-6631 OPEN WELL W/ 869#. BD 2621# AT 4.5 BPM. ISIP 2083#, FG .75. PMP PAD 4050# AT 51, 100% OPEN. MP 5190, MR 51.1, AP 3809, AR 50.2. PMP 2231 BBL SLK WTR. 90,014# 30/50 AND 5000# 20/40 RESIN COATED (TOT PROP 95,014#). ISIP 2514, NPI 431, FG .82.
	13:40	- 14:15	0.58	COMP	34		P	RIH AND SET 4-1/2" HAL CO CBP KILL PLUG AT 6437", POOH.
	14:15	- 15:30	1.25	COMP	46	Е	P	RDMO SUPERIOR AND CASEDHOLE EQUIP.
		- 18:00	2.50	COMP	31	Ü	P	ND FRAC VALVES. NU BOP. RU FLOOR. MU 3-7/8" BIT, POBS, AND 1.87" XN ON 2-3/8" J-55 TBG AND RIH W/ 148 JTS. SDFN AND WITNERIZE EQUIP.
2/19/2009		- 7:00	0.25	COMP	48		Р	JSA- PU TBG. PWR SWIVEL. D/O PLUGS.
	7:00	- 18:30	11.50	COMP	44	C	P	CONT RIH AS MEAS AND PU 52-JTS. TAG SAND AT 6422' W/ 202-JTS IN. PU PWR SWIVEL. EST CIRC. D/O PLUGS.
								#1- C/O 12' SAND TO CBP AT 6434'. D/O IN 12-MIN. 50# INC. RIH. #2- C/O 31' SAND TO CBP AT 6661'. D/O IN 15-MIN. 100# INC. RIH. #3- C/O 31' SAND TO CBP AT 6998'. D/O IN 10-MIN. 100# INC. RIH. #4- C/O 30' SAND TO CBP AT 7631'. D/O IN 8-MIN 100# INC. RIH. PBTD. C/O 120' SAND TO PBTD AT 8218' (255' RATHOLE) W/ 259-JTS IN. CIRC CLEAN.
								RD PWR SWIVEL. POOH AS LD 27-JTS TBG. PU 7" 5K HANGER AND LUB IN. FLUSH BOWL. LAND 232-JTS 2-3/8" J-55 TBG W/ EOT AT 7378.29'. RD FLOOR. DROP BALL. ND BOP. NU WH. HOOK UP LINES. RELEASE POBS AT 1800#. TURN WELL OVER TO FLOW BACK CREW. RDSU AND ROAD TOWARDS 29M PAD.
								TBG DETAIL KB 18.00 7" 5K CAMERON HNGR 1.00 232-JTS 2-3/8" J-55 7357.09 1.87" XN (FE) 2.20 EOT 7378.29
								DELIVERED 283-JTS RETURNED 51-JTS
								PMP 7613 BBLS RCVR 1890 BBLS LTR 5723 BBLS.

1/5/2010 1:25:33PM

			i pere	ion Same	
Vell: NBU 102	22-10HT	Spud	Conductor	r: 11/12/2009	Spud Date: 11/13/2009
Project: UTAH	-UINTAH	Site: N	IBU 293 P	AD	Rig Name No: LEED 733/733
Event: COMPL	ETION	Start D	Date: 12/14	4/2009	End Date: 12/24/2009
Active Datum: ₋evel)	RKB @4,809.00ft (ab	ove Mean Sea	UWI: 0	/10/S/22/E/10/0/SE	ENE/26/PM/N/1,798.00/E/0/297.00/0/0
	1.000 1.000	Kerran Alays Karal	. Cos		
12/20/2009	7:00 -		33	A	7 AM FLBK REPORT: CP 2300#, TP 1650#, 20/64" CK, 49 BWPH, TRACE SAND, LIGHT GAS TTL BBLS RECOVERED: 2642 BBLS LEFT TO RECOVER: 4971
12/21/2009	7:00 -		33	A	7 AM FLBK REPORT: CP 2525#, TP 1725#, 20/64" CK, 31 BWPH, TRACE SAND, LIGHT GAS TTL BBLS RECOVERED: 3586 BBLS LEFT TO RECOVER: 4027
12/22/2009	7:00 -		33	A	7 AM FLBK REPORT: CP 2250#, TP 1550#, 20/64" CK, 27 BWPH, TRACE SAND, MEDIUM GAS TTL BBLS RECOVERED: 4288 BBLS LEFT TO RECOVER: 3325
12/23/2009	7:00 -		33	A	7 AM FLBK REPORT: CP 2025#, TP 1325#, 20/64" CK, 18 BWPH, TRACE SAND, MEDIUM GAS TTL BBLS RECOVERED: 4789 BBLS LEFT TO RECOVER: 2824
12/24/2009	7:00		33		7 AM FLBK REPORT: CP 1925#, TP 1275#, 20/64" CK, 18 BWPH, TRACE SAND, MEDIUM GAS TTL BBLS RECOVERED: 4951 BBLS LEFT TO RECOVER: 2662
1/4/2010	15:00 -	PROD	50		WELL TURNED TO SALE @ 1500 HR ON 01/04/2010 - FTP 2275#, CP 3110#, 2.9 MCFD, 40 BWPD, 46/64 CK

SUNDF Do not use this form for propositions bottom-hole depth, reenter plud price of the proposals. 1. TYPE OF WELL Gas Well 2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ONS 3. ADDRESS OF OPERATOR: P.O. Box 173779 1099 18th S 4. LOCATION OF WELL FOOTAGES AT SURFACE: 1798 FNL 0297 FEL	5.LEASE DESIGNATION AND SERIAL NUMBER: UTU-025187 6. IF INDIAN, ALLOTTEE OR TRIBE NAME: 7.UNIT OF CA AGREEMENT NAME: NATURAL BUTTES 8. WELL NAME and NUMBER: NBU 1022-10HT 9. API NUMBER: 43047401950000 9. FIELD and POOL OF WILDCAT: NATURAL BUTTES COUNTY: UINTAH										
QTR/QTR, SECTION, TOWNSHI Qtr/Qtr: SENE Section: 10	STATE: UTAH										
CHE TYPE OF SUBMISSION	CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA										
NOTICE OF INTENT Approximate date work will start: 3/8/2011 SUBSEQUENT REPORT Date of Work Completion:	ACIDIZE CHANGE TO PREVIOUS PLANS CHANGE WELL STATUS DEEPEN OPERATOR CHANGE PRODUCTION START OR RESUME REPERFORATE CURRENT FORMATION	ALTER CASING CHANGE TUBING COMMINGLE PRODUCING FORMATIONS FRACTURE TREAT PLUG AND ABANDON RECLAMATION OF WELL SITE SIDETRACK TO REPAIR WELL	CASING REPAIR CHANGE WELL NAME CONVERT WELL TYPE NEW CONSTRUCTION PLUG BACK RECOMPLETE DIFFERENT FORMATION TEMPORARY ABANDON								
☐ DRILLING REPORT Report Date:	☐ TUBING REPAIR ☐ WATER SHUTOFF ☐ WILDCAT WELL DETERMINATION	VENT OR FLARE SI TA STATUS EXTENSION OTHER	☐ WATER DISPOSAL ☐ APD EXTENSION OTHER:								
The operator request the subject well locat	MPLETED OPERATIONS. Clearly show all pertine approval to conduct wellhead/caion. Please find the attached propair work for the subject well loo	asing repair operations of ocedures for the propose cation.	Accepted by the Utah Division of Oil, Gas and Mining								
NAME (PLEASE PRINT) Gina Becker	PHONE NUMBER 720 929-6086	TITLE Regulatory Analyst II									
SIGNATURE N/A		DATE 3/8/2011									

WORKORDER #: 88120971 3/2/11

Name: NBU 1022-10HT - Single Well
Surface Location: SENE SEC.10, T10S, R22E

Uintah County, UT

API: 4304740195 **LEASE#:** UTU 025187

ELEVATIONS: 4791' GL 4809' KB

TOTAL DEPTH: 8283' **PBTD:** 8218'

SURFACE CASING: 9 5/8", 36# J-55 @ 1652'

PRODUCTION CASING: 4 1/2", 11.6#, I-80 @ 8263'

TOC @ Surface per CBL

PERFORATIONS: Mesaverde 6487' – 7963'

Tubular/Borehole	Drift	Collapse	Burst	Capacities						
	inches	psi	psi	Gal./ft.	Cuft/ft.		Bbl./ft.			
2.375" 4.7# J-55 tbg.	1.901	8100	7700	0.1624		0.02173	0.00387			
4.5" 11.6# I-80	3.875	6350	7780	0.6528		0.0872	0.01554			
9.625" 36# J-55	8.921	2020	3520	3.247		0.434	0.0773			
Annular Capacities										
2.375" tbg. X 4 ½" 11.6#	csg	0.4227	0.0565		0.01006					

GEOLOGICAL MARKERS, TOPS:

706' Green River

1383' Mahogany

3872' Wasatch

6140' Mesaverde

NBU 1022-10HT - WELLHEAD REPLACEMENT PROCEDURE

PREP-WORK PRIOR TO MIRU:

- 1. Dig out down to the 2" surface casing valve or to the valve on the riser off the surface casing.
- 2. Install a tee with 2 valves, with a pressure gauge and sensor on one valve.
- 3. Open casing valve and record pressures.
- 4. Install nipple and steel hose on the other valve, the relief valve,. Do not use hammer unions. No impact equipment or tools to be used for any of this installation. Extend hose and hard piping to a downwind location at least 100' from the wellhead. Consider installing a manifold so that vent area could be in two locations approx. 90 degrees apart from the wellhead.
- 5. Open the relief valve and blow well down to the atmosphere.
- 6. Make a determination of amount of gas flow, either by installation of a choke nipple, bucket test or other.
- 7. Shut well in. Observe for rate of build-up by utilizing sensor data. Do not build-up for more than 24 hours. Vent gas through the vent line and leave open to the atmosphere.

WORKOVER PROCEDURE:

- 1. MIRU workover rig.
- 2. Kill well with 10# brine / KCL (dictated by well pressure).
- 3. Remove tree, install double BOP with blind and 2 3/8" pipe rams, with accumulator closing unit and manual back-ups. Function test BOP system.
- 4. POOH w/ tubing laying down extra tubing.
- 5. Rig up wireline service. RIH and set CBP @ ~6437'. Dump bail 4 sx cement on top of plug. POOH and RD wireline service. TIH w/ tubing and seating nipple. Land tubing ±60' above cement. RDMO.
- 6. Monitor well pressures. If surface casing is dead. MIRU. ND WH and NU BOP. POOH w/ tubing.
- 7. Depending on conditions at wellsite, continue with either CUT/PATCH Procedure or BACK-OFF Procedure.

CUT/PATCH PROCEDURE:

- 1. PU internal casing cutters and RIH. Cut casing at +/- 30' from surface.
- 2. POOH, LD cutters and casing.
- 3. PU 7 3/8" overshot with 4 ½" right hand standard wicker grapple, 1 4 ¾" drill collar with 3 ½" IF threads, pup joint, manual bumper sub, and crossovers. If casing cut is deeper than ±30' utilize >7000 ft-lb torque pipe as needed. Pull a minimum of 10,000# to keep grapple engaged if cement top is high (<~900'). If cement top is low (>~900'), more weight will be required to put casing in neutral. Torque casing string to ±7000 ft-lbs, count number of turns to make-up, and document in the daily report. Ensure that tongs are safely anchored to rig and that all personnel are at a safe working distance from the tongs during torque-up and torque release. After initial make-up, place pipe torque to neutral and mark pipe. Place ±7000 ft-lbs on casing a second time, count turns, then return pipe torque to neutral and count turns. Repeat if torque-up turns do not equal torque release turns. Once torque-in equals torque-out, release overshot, POOH, and lay down.
- 4. TIH w/ skirted mill and dress off the fish top for approximately ½ hour. TOOH.
- 5. PU & RIH w/ $4\frac{1}{2}$ " 10k external casing patch on $4\frac{1}{2}$ " P-110 casing. Ensure that sliding sleeve assembly shifts ±3' and casing tags no-go portion of patch. NOTE: Shear pins will shear at 3500 to 4500 lbs.
- 6. Latch fish, PU to 100,000# tension. RU B&C. Cycle pressure test to 7,000# / 9,000# psi.
- 7. Install slips. Land casing w/ 80,000# tension.
- 8. Cut-off and dress 4 ½" casing stub.
- 9. NUWH. PU 3 7/8" bit, POBS and RIH. D/O cement and plug ~6387'. Clean out to PBTD (8218').
- 10. POOH, land tbg and pump off POBS.
- 11. NUWH, RDMO. Turn well over to production ops.

BACK-OFF PROCEDURE:

- 1. PU internal casing cutters and RIH. Cut casing at +/- 6' from surface.
- 2. POOH, LD cutters and casing.
- 3. PU 4 ½" overshot. RIH, latch fish. Pick string weight to neutral.
- 4. MIRU casing crew and wireline services. RIH and shoot string shot at casing collar @ ± 46'.
- 5. Back-off casing, POOH.

- 6. PU new casing joint with buttress threads and entry guide and RIH. Tag casing top. Thread into casing and torque up to ±7000 ft-lbs, count number of additional turns to make-up, and document in the daily report. Ensure that tongs are safely anchored to rig and that all personnel are at a safe working distance from the tongs during torque-up and torque release. After initial make-up, place pipe torque to neutral and mark pipe. Place ±7000 ft-lbs on casing a second time, count turns, then return pipe torque to neutral and count turns. Repeat if torque-up turns do not equal torque release turns. Once torque-in equals torque-out go to step 7.
- 7. PU 100,000# tension string weight. RU B&C. Cycle pressure test to 7,000# / 9,000# psi.
- 8. Install slips. Land casing w/ 80,000# tension.
- 9. Cut-off and dress 4 ½" casing stub.
- 10. NUWH. PU 3 7/8" bit, POBS and RIH. D/O cement and plug ~6387'. Clean out to PBTD (8218').
- 11. POOH, land tbg and pump off POBS.
- 12. NUWH, RDMO. Turn well over to production ops.

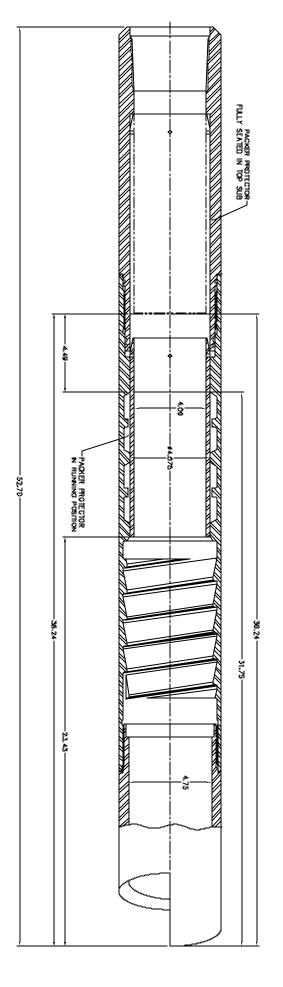


Logan High Pressure Casing Patches Assembly Procedure

All parts should be thoroughly greased before being assembled.

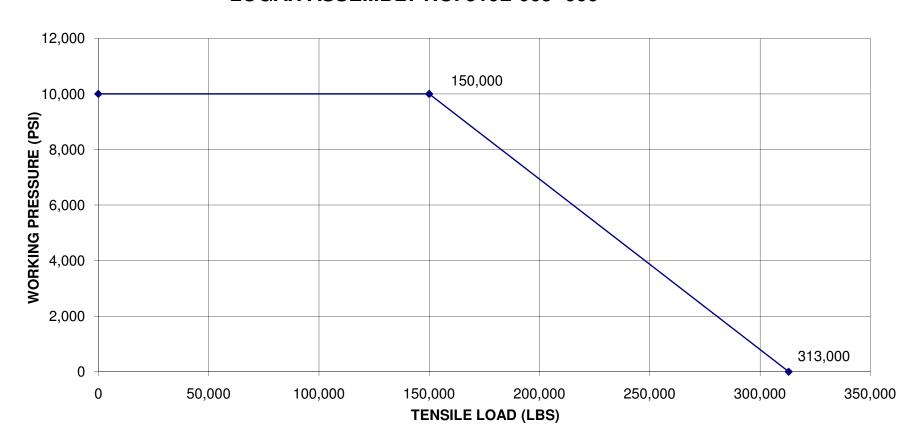
- 1. Install all four Logan Type "L" Packers in the spaces provided in the Casing Patch Bowl. Refer to diagram provided for proper installation.
- 2. Install Packer Protector from the Basket Grapple end of the Bowl. The beveled end of the Packer Protector goes in first. Carefully push the Packer Protector through the four Type "L" Packers.
- 3. Align Shear Pin Holes in Packer Protector so that the holes have just passed into the counter bore at the Top Sub end, refer to diagram. The Packer Protector is provided with four Shear Pin Holes. Use only two holes, 180 degrees apart and install the pins.
- 4. Screw the Basket Grapple in from the lower end of the Bowl, using left-hand rotation. The Tang Slot in the Basket Grapple must land in line with the slot in the Bowl.
- 5. Insert the Basket Grapple Control into the end of the Bowl. Align Tang on the Basket Grapple Control with the Tang Slot of the Bowl and Basket Grapple. This secures the Bowl and the Basket Grapple together.
- 6. Install the Cutlipped Guide into the lower end of the Bowl.
- 7. Install O-Rings on the two five-foot long Extensions. Screw the first Extension into the top end of the Bowl. Screw the second Extension into the top end of the first Extension.
- 8. Install O-Ring on Top Sub. Screw Top Sub into top end of second Extension.

Follow recommended Make-Up Torque as provided in chart.



510L-005-001 4-1/2" LOGAN HP CASING PATCH

STRENGTH DATA FOR LOGAN 5.88" OD "L" TYPE CSG PATCH 4-1/2 CASING, 10K PSI MAX WP 125K YIELD MAT'L LOGAN ASSEMBLY NO. 510L-005 -000



COLLAPSE PRESSURE: 11,222 PSI @ 0 TENSILE 8,634 PSI @ 220K TENSILE

Tensile Strength @ Yield: Tensile Strength w/ 0 Int. Press.= 472,791lbs. Tensile Strength w/ 10K Int. Press.= 313,748lbs.